

# 350 Mission Street Office Project

PLANNING DEPARTMENT CASE NO. 2006.1524E

STATE CLEARINGHOUSE NO. 2010062013

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Draft EIR Public Hearing	Date: OCTOBER 21, 2010
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Final EIR Certified:	FEBRUARY 10, 2011

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## SAN FRANCISCO

## PLANNING DEPARTMENT

## **Planning Commission Motion 18265**

**HEARING DATE: February 10, 2011** 

Case No.:

2006.1524E

Project Title:

350 Mission Street

Zoning:

C-3-O (Downtown Office) District

550-S Height and Bulk District

Block/Lot:

3710/017

Lot Size:

18,905 square feet

Project Sponsor

GLL US Office, L.P., Owner

Lead Agency:

San Francisco Planning Department

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ADOPTING FINDINGS RELATED TO THE CERTIFICATION OF A FINAL ENVIRONMENTAL IMPACT REPORT FOR A PROPOSED MIXED-USE OFFICE PROJECT AT 350 MISSION STREET WITH A 24-STORY, 350-FOOT TALL BUILDING CONTAINING APPROXITATRELY 340,000 SQUARE FEET OF OFFICE USES, 6,500 SQUARE FEET OF RETAIL SPACE, 23,500 SQAURE FEET OF SUBTERRANEAN PARKING AREA, AND 7,000 SQAURE FEET OF PUBLICLY-ACCESSIBLE INTERIOR OPEN SPACE.

MOVED, that the San Francisco Planning Commission (hereinafter "Commission") hereby CERTIFIES the Final Environmental Impact Report identified as Case No. 2006.1524E, 350 Mission Street (hereinafter "Project"), based upon the following findings:

- 1. The City and County of San Francisco, acting through the Planning Department (hereinafter "Department") fulfilled all procedural requirements of the California Environmental Quality Act (Cal. Pub. Res. Code Section 21000 et seq., hereinafter "CEQA"), the State CEQA Guidelines (Cal. Admin. Code Title 14, Section 15000 et seq., (hereinafter "CEQA Guidelines") and Chapter 31 of the San Francisco Administrative Code (hereinafter "Chapter 31").
  - A. The Department determined that an Environmental Impact Report (hereinafter "EIR") was required and provided public notice of that determination by publication in a newspaper of general circulation on June 2, 2010.
  - B. On September 15, 2010, the Department published the Draft Environmental Impact Report (hereinafter "DEIR") and provided public notice in a newspaper of general circulation of the availability of the DEIR for public review and comment and of the date and time of the Planning Commission public hearing on the DEIR; this notice was mailed to the Department's list of persons requesting such notice.
  - C. Notices of availability of the DEIR and of the date and time of the public hearing were posted near the project site by Department staff on September 15, 2010.

- D. On September 15, 2010, copies of the DEIR were mailed or otherwise delivered to a list of persons requesting it, to those noted on the distribution list in the DEIR, to adjacent property owners, and to government agencies, the latter both directly and through the State Clearinghouse.
- E. Notice of Completion was filed with the State Secretary of Resources via the State Clearinghouse on September 15, 2010.
- 2. The Commission held a duly advertised public hearing on said DEIR on October 21, 2010 at which opportunity for public comment was given, and public comment was received on the DEIR. The period for acceptance of written comments ended on November 2, 2010.
- 3. The Department prepared responses to comments on environmental issues received at the public hearing and in writing during the 45-day public review period for the DEIR, prepared revisions to the text of the DEIR in response to comments received or based on additional information that became available during the public review period, and corrected errors in the DEIR. This material was presented in a Draft Comments and Responses document, published on January 27, 2011, distributed to the Commission and all parties who commented on the DEIR, and made available to others upon request at Department offices.
- 4. A Final Environmental Impact Report has been prepared by the Department, consisting of the Draft Environmental Impact Report, any consultations and comments received during the review process, any additional information that became available, and the Summary of Comments and Responses all as required by law.
- 5. Project Environmental Impact Report files have been made available for review by the Commission and the public. These files are available for public review at the Department offices at 1650 Mission Street, and are part of the record before the Commission.
- 6. On February 10, 2011, the Commission reviewed and considered the Final Environmental Impact Report and hereby does find that the contents of said report and the procedures through which the Final Environmental Impact Report was prepared, publicized, and reviewed comply with the provisions of CEQA, the CEQA Guidelines, and Chapter 31 of the San Francisco Administrative Code.
- 7. The project sponsor has indicated that the presently preferred alternative is Alternative C: No Parking Alternative, described in the Final Environmental Impact Report.
- 8. The Planning Commission hereby does find that the Final Environmental Impact Report concerning File No. 2006.1524E, 350 Mission Street reflects the independent judgment and analysis of the City and County of San Francisco, is adequate, accurate and objective, and that the Comments and Responses document contains no significant revisions to the DEIR, and hereby does CERTIFY THE COMPLETION of said Final Environmental Impact Report in compliance with CEQA and the CEQA Guidelines.

- 9. The Commission, in certifying the completion of said Final Environmental Impact Report, hereby does find that the project described in the Environmental Impact Report:
  - A. Will have a project-specific significant effect on the environment through (Air Quality) construction of the proposed project exposing sensitive receptors to substantial pollutant concentrations; and,
  - B. Will have a significant cumulative impact on the environment through (Transportation) disruption of nearby streets, transit services, and pedestrian and bicycle circulation due to construction of the proposed project, Transit Center, and other nearby projects.

I hereby certify that the foregoing Motion was ADOPTED by the Planning Commission at its regular meeting of February 10, 2011.

Linda Avery

Commission Secretary

AYES:

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NOES:

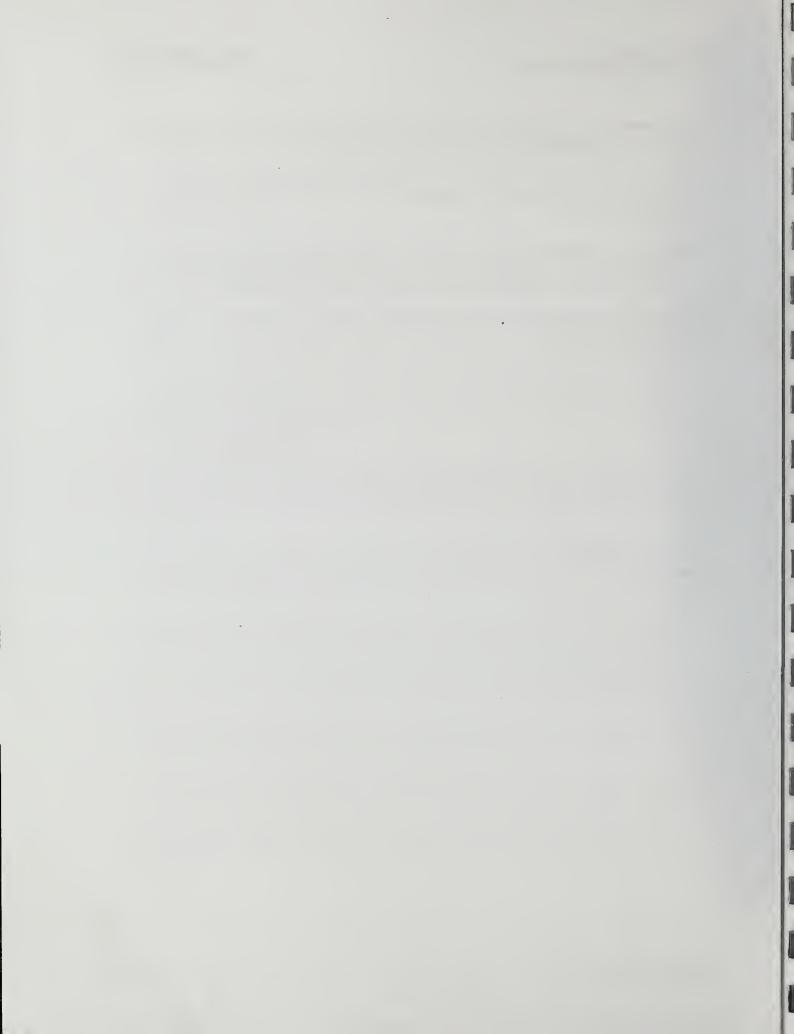
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ABSENT:

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ADOPTED:

February 10, 2011



# FINAL ENVIRONMENTAL IMPACT REPORT

# 350 Mission Street Office Project

PLANNING DEPARTMENT CASE NO. 2006.1524E

STATE CLEARINGHOUSE NO. 2010062013

Changes from the Draft EIR text are indicated by a dot (e) in the left margin (adjacent to page number for added pages and figures; adjacent to table number for tables).



Draft EIR Publication Date:	SEPTEMBER 15, 2010
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## List of Acronyms and Abbreviations

AB Assembly Bill

ABAG Association of Bay Area Governments
ARB California Air Resources Board

BAAOMD Bay Area Air Quality Management District

BCDC San Francisco Bay Conservation and Development Commission

CEQA California Environmental Quality Act

CO Carbon Monoxide CO<sub>2</sub> Carbon Dioxide

CO<sub>2</sub>E Carbon Dioxide-equivalent

dB Decibel

dBA A-Weighted Decibel

DBI San Francisco Department of Building Inspection

DEIR Draft Environmental Impact Report

DPH San Francisco Department of Public Health

DPM Diesel Particulate Matter
EIR Environmental Impact Report

EPA United States Environmental Protection Agency

FAR Floor-area ratio
GFA Gross Floor Area
GHG Greenhouse Gas
GSF Gross Square Feet
Ldn Day-Night Noise Level

LEED® Leadership in Energy and Environmental

LOS Level of Service (measure of traffic or other transportation operations)

MMT Million Metric Tons mph Miles per Hour

MTA San Francisco Municipal Transportation Authority

MTA/SSD Municipal Transportation Agency Sustainable Streets Division

MTC Metropolitan Transportation Commission
NAAQS National Ambient Air Quality Standards

NCT Neighborhood Commercial-Transit (zoning district)

NEPA National Environmental Policy Act

NO2Nitrogen DioxideNOxNitrogen OxidesNOPNotice of PreparationPMParticulate Matter

PM<sub>2.5</sub> Particulate Matter 2.5 microns or less in diameter PM<sub>10</sub> Particulate Matter 10 microns or less in diameter

PMP Pedestrian Transportation Master Plan

ppb Parts per Billion ppm Parts per Million

pphm Parts per Hundred Million ROG Reactive Organic Gases

SAAQS State Ambient Air Quality Standards

SB Senate Bill

SFD San Francisco City Datum

SFPUC San Francisco Public Utilities Commission

SMP Streetscape Master Plan

SO<sub>2</sub> Sulfur Dioxide

TACs Toxic Air Contaminants
TEP Transit Effectiveness Project
TDR Transfer of Development Rights
TJPA Transbay Joint Powers Authority
v/c ratio Volume-to-Capacity Ratio

 $\begin{array}{ccc} v/c \ ratio & Volume-to-Capacity \ Ratio \\ VOC & Volatile \ Organic \ Compounds \\ \mu g/m^3 & Micrograms \ per \ Cubic \ Meter \end{array}$ 

## SUMMARY

## A. Project Description

The 19,000-square-foot project site, located at 350 Mission Street, on the northeast corner of Mission and Fremont Streets, is on Assessor's Block 3710, Lot 17. The site is within the C-3-O Downtown Office Use District and the 550-S Height and Bulk District (550 foot height limit; setbacks required for tower floors). The site is occupied by a four-story, approximately 60-foot-tall, 95,000-square-foot building that is largely occupied by Heald College, with ground-floor retail space. No off-street parking or loading spaces are provided within the existing building on the site.

The proposed project would consist of a 24-story, approximately 375-foot-tall office tower (including 20foot-tall rooftop mechanical area) with office uses occupying approximately 356,000 square feet. The floor area ratio would be 18:1. The 50-foot-tall ground floor, incorporating a mezzanine, would provide about 6,600 square feet of retail and restaurant space, along with 6,960 square feet of publicly accessible indoor open space in an "indoor park," as set forth in the San Francisco Planning Code (Section 138) and Downtown Plan (Table 1, Guidelines for Downtown Open Space). Vehicle and freight loading access would be via a driveway on Fremont Street on the northwest corner of the site, and would include two full-size and two service-vehicle loading spaces; 61 parking spaces on three basement levels (including three spaces for shared electric vehicles with battery charging capability); and 64 bicycle parking spaces. Rooftop mechanical equipment, including a diesel-powered emergency generator rated at 800 kilowatts, would be enclosed within a 20-foot tall mechanical penthouse, included within the 375-foot building height.

The combined ground floor and mezzanine levels would be the project's primary distinguishing feature in terms of articulation and materials. At the corner of Mission and Fremont Streets, the ground floor and mezzanine together would serve as an approximately 50-foot-tall atrium, large portions of which would be open to the sidewalk in good weather. Publicly accessible open space would be located on both the ground floor and mezzanine, and the atrium would have large expanses of clear glass. Behind the glass columns would rise the full height of the atrium. A glazed, oval-shaped enclosure near the southeast corner of the atrium would house retail space on the ground floor and a dining/conference room at the mezzanine level. Above the atrium, the project would be clad in a glass curtain wall.

The proposed project would be constructed atop a mat foundation. Excavation for the basement and foundation would extend to approximately 50 feet below grade, and would require removal of approximately 35,000 cubic yards of soil. The proposed project would include planting of new street trees on the Fremont and Mission Street project frontages, in compliance with *Planning Code* Section 143. Project construction would take about approximately 22 months, and occupancy is anticipated in late 2012. Construction costs are currently estimated at approximately \$85 million. The project architect is Skidmore, Owings & Merrill LLP.

The project's office component (spanning from approximately 55 to 375 feet in height) would have no setbacks from the property line along the west (Fremont Street) and south (Mission Street) facades. The east façade would generally be set back between 6.5 and 14 feet from the east property line (12.5 to 19 feet from the building at 50 Beale Street). The north façade would be set back about 6.5 feet from the north property line (about 45 feet from the building at 45 Fremont Street). These interior setbacks would not comply with the requirements of *Planning Code* Section 132.1(c) for separation of towers, and the proposed project would therefore require an exception, as permitted under Section 309, Permit Review in C-3 Districts. The proposed project would also require an exception to the *Planning Code* Section 270 requirements for building bulk, for the portion of the building considered the upper tower (above 220 feet), because the tower would exceed both the permitted diagonal plan dimension (approximately 178 feet, compared to 160 feet permitted), as well as the permitted average floor area (about 15,000 square feet, compared to 12,000 square feet permitted). Accordingly, the project would require exceptions to the upper tower bulk limits, as is permitted under Section 309. In addition, the proposed project would require an exception from the requirements for ground-level winds (*Planning Code* Section 148).

The proposed project would meet or exceed *Planning Code* requirements for vehicle parking (no more than 7 percent of gross floor area), off-street loading, bicycle parking, on-site open space, street trees, and would also comply with *Code* requirements for pedestrian streetscape improvements (Section 138.1); downtown park fees (Section 139); public art (Section 149); transportation management and transportation brokerage services (Section 163); San Francisco Resident Placement and Training Program (Section 164); and child care plans and child-care brokerage (Section 165); as well as transit development impact fees under Article 38 of the *Administrative Code*.

Implementation of the proposed project would require the following approval actions:

## Planning Commission

- Approval of the project under *Planning Code* Section 309, including exceptions with regard to building bulk (Section 270, including less than the required upper-tower volume reduction under Section 270(d)(3)(B)), separation of towers (Section 132.1(c)), ground-level winds (Section 148), and the prohibition on curb cuts along Transit Preferential Streets where an alternative frontage is available (Section 155(r)(4)).
- Allocation of office space under Planning Code Section 321 (Office Development Annual Limit).

### Zoning Administrator

• Variance from the maximum driveway width, per *Planning Code* Section 155(s)(5)(A), of 27 feet.

## Department of Building Inspection

Demolition, site, and building permits.

## Department of Public Works

• Street Space Permit from the Bureau of Street Use and Mapping for use of a public street space during project construction (for a pedestrian walkway)

## Municipal Transportation Agency

 Special Traffic Permit from the Municipal Transportation Agency Sustainable Streets Division for use of a public street space during project construction (for a pedestrian walkway)

## Bay Area Air Quality Management District

 Authority to Construct and Permit to Operate the proposed diesel-powered emergency generator.

## **B. Environmental Impacts and Mitigation Measures**

This EIR analyzes the potential effects of the proposed 350 Mission Street project, as determined in the Initial Study and Notice of Preparation of an Environmental Impact Report (NOP), issued June 2, 2010, 2010 (Appendix A of this EIR).

This EIR contains detailed analyses of topics including land use, transportation, air quality, greenhouse gases, wind, and shadow. Table S-1 presents a summary of the significant adverse environmental effects and mitigation measures identified in the EIR, along with mitigation measures identified to reduce those impacts to a less-than-significant level, where applicable.

There are several items required by local, state, and federal law that would serve to avoid potential significant impacts; they are summarized here for informational purposes. These measures include: no use of mirrored glass on the building to reduce glare, as per City Planning Commission Resolution 9212; limitation of construction-related noise levels, pursuant to the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code, 1972); compliance with Section 3424 of the San Francisco Building Code, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures; and observance of state and federal OSHA safety requirements related to handling and disposal of other hazardous materials, such as asbestos. Because compliance with the law would obviate any potential impacts related to the above issues, neither significant impacts nor mitigation measures are identified in connection with these issues.

# C. Significant Environmental Impacts That Cannot Be Avoided in the Project Is Implemented

## **Transportation**

Cumulative construction impacts could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles. Mitigation would require that the project sponsor and/or construction contractor coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Golden Gate Transit, as well as Muni, AC Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic. Nevertheless, simultaneous construction of the proposed project and the Transit Center could disrupt Golden Gate Transit operations, should both projects simultaneously preclude use of the Fremont Street curb lane as an afternoon bus embarkation site. Although mitigation is identified that could relocate Golden Gate Transit buses to an existing

# TABLE S-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED 350 MISSION STREET PROJECT

Potential Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
1. SIGNIFICANT, UNAVOIDABLE IMPACTS			
B. Transportation			
TR-9: Project construction, along with construction of the planned Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.	Significant	M-TR-9a Construction-Period Golden Gate Transit Bus Stop Relocation: To minimize potential disruptions to Golden Gate Transit during project construction, Golden Gate Transit buses would use the existing boarding island adjacent to the left lane of Fremont Street during construction of the proposed project, assuming Golden Gate Transit determines that this location is the most feasible choice and the Municipal Transportation Agency concurs with use of the Island.  M-TR-9b: Construction Coordination: To minimize potential disruptions to Golden Gate Transit (and other transit operators), the project sponsor and/or construction contractor would coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transit Center project, and with Golden Gate Transit, as well as Muni. AC Transit, Center project, and with Golden Gate Transit, as well as Muni. AC Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.	Significant and Unavoidable
C. Air Quality			
AQ-1: Project construction could expose sensitive receptors to substantial pollutant concentrations.	Significant	<ul> <li>M-AQ-1: Construction Vehicle Emissions Minimization. To reduce the potential health nisk resulting from project construction activities, the project sponsor shall include in contract specifications a requirement the following BAAQMD-recommended measures:</li> <li>Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (less than the five minutes identified above in Improvement Measure I-AQ-1b);</li> <li>The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include, as the primary option, use of Interim Tier 4 equipment where such equipment is available and feasible for use, the use of other late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available;</li> <li>All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM, including Tier 3 or alternative fuel engines where such equipment is available and feasible for use;</li> <li>All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and</li> </ul>	Significant and Unavoidable

S-4 207037

350 Mission Street

# ${\bf TABLE~S-1~(cont'd.)}\\ {\bf SUMMARY~OF~IMPACTS~AND~MITIGATION~MEASURES~FOR~THE~PROPOSED~350~MISSION~STREET~PROJECT\\ \\$

Potential Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
		<ul> <li>The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available.</li> <li>Improvement Measure I-AQ-1a: Dust Control Plan. To reduce construction related dust emissions, the project sponsor shall incorporate into construction specifications the requirement for development and implementation of a site-specific Dust Control Plan shall require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feat of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third party to conduct inspections and keep a record of those inspections; establish shutlends shutlends wor conditions based on wind, soil infigation, etc.; establish a potition of surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust currains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling rucks to the size of the truck bed and secure soils with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and extiling construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and sweep adjacent streets to reduce particulate compliance with dust control requirements.</li> <li>Improvement Measure I-AQ-1b: Construction Vehicle Emissions Minimization: To reduce construction vehicle emissions, the project sponsor soil and properly tuned in accordance to following into construction specifications:     <ul></ul></li></ul>	
2. SIGNIFICANT BUT MITIGABLE IMPACTS			

# B. Transportation

TR-4: Traffic entering and exiting the	Significant	Ē
proposed project garage on Fremont		WOL
Street could interfere with, and be		the
delayed by, Golden Gate Transit buses		relo
boarding at the Fremont Street curb,		its
potentially obstructing pedestrian traffic		exis
on the east sidewalk of Fremont Street		sigr

M-TR 4a: Relocation of Golden Gate Transit Bus Stops. The project sponsor would work with the Golden Gate Bridge. Highway, and Transportation District and	the San Francisco Municipal Transportation Authority Sustainable Streets Division to	S & E & X	M-TR-4a: Relocation of Golden Gate Transit Bus Stops. The project sponsor would work with the Golden Gate Bridge, Highway, and Transportation District and the San Francisco Municipal Transportation Authority Sustainable Streets Division to relocate the bus stop for Golden Gate Transit lines 26, 27, and 44 by 20 feet south of its existing location, and to relocate the bus stop for line 38 by 20 feet north of its existing location. The project sponsor would pay any resulting costs, such as for new signade, engineering drawings, and the like.
the San Francisco Municipal Transportation Authority Sustainable Streets Division to		9	locate the bus stop for Golden Gate Transit lines 26, 27, and 44 by 20 feet south of
the San Francisco Municipal Transportation Authority Sustainable Streets Division to relocate the bus stop for Golden Gate Transit lines 26, 27, and 44 by 20 feet south of	relocate the bus stop for Golden Gate Transit lines 26, 27, and 44 by 20 feet south of	its	s existing location, and to relocate the bus stop for line 38 by 20 feet north of its
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Less than Significant

350 Mission Street

# TABLE S-1 (cont'd.) SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED 350 MISSION STREET PROJECT

Potential Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
and potentially resulting in safety hazards.		M-TR-4b: Garage Attendant. The project sponsor shall ensure that building management employs an attendant for the parking garage, to be stationed at the project's Fremont Street driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with Golden Gate Transit buses and Fremont Street traffic during afternoon periods of Golden Gate Transit use of the site frontage—at a minimum, from 3:00 p.m. to 7:15 p.m., or as required based on Golden Gate Transit schedules. (See also Mitigation Measure M-TR-5a, below.)	
TR-5: The proposed project would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrian or otherwise interfere with pedestrian accessibility to the site and adjoining areas.	Significant	M-TR-5a: Garage/Loading Dock Attendant. The project sponsor shall ensure that building management employs an attendant for the parking garage and loading dock, to be stationed at the project's Fremont Street driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with pedestrians on the sidewalk during the a.m. and p.m. peak periods of traffic and pedestrian activity—at a minimum, from 7:00 a.m. to 9:00 a.m. and from 3:00 p.m. to 7:15 p.m., with extended hours as dictated by traffic and pedestrian conditions and by activity in the project garage and loading dock. (See also Mitigation Measure M-TR-4b, above.)	Less than Significant
		M-TR-5b: Warning Devices. The project sponsor shall install audible and visible warning devices to alert pedestrians of the outbound vehicles from the parking garage and loading dock.  M-TR-5c: Limitation on Loading Dock Hours. The project sponsor shall ensure	
		that building management prohibits use of the loading dock during hours when the adjacent curb lane is used by Golden Gate Transit buses (currently, 3:00 p.m. to 7:15 p.m.).	
TR-7: The proposed project would not result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, but could create potentially hazardous could create potentially hazardous traffic, transit, bicycles or pedestrians.	Significant	M-TR-7: Limitation on Truck Size. To ensure that trucks longer than 30 feet in length are not permitted to use the loading dock, the project sponsor would ensure that office and retail tenants in the building are informed of truck size limitations. In the event that trucks larger than 30 feet in length attempt to access the loading dock, the garage/loading dock attendant (see Mitigation Measure M-TR-5a) would direct these trucks to use on-street loading zones (if available) or off-load deliveries to smaller trucks off-site and return to use the loading dock.	Less than Significant
3. LESS-THAN-SIGNIFICANT IMPACTS			
B. Transportation			
TR-1: Traffic generated by the proposed project would incrementally increase average vehicle delay, but would not degrade level of service at local intersections.	Less than Significant	None required.	Less than Significant

 ${\bf TABLE~S-1~(cont'd.)}\\ {\bf SUMMARY~OF~iMPACTS~AND~MITIGATION~MEASURES~FOR~THE~PROPOSED~350~MISSION~STREET~PROJECT\\ \\$ 

Potential Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
TR-2: Traffic generated by the proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would degrade level of service at certain local intersections, but project traffic would not contribute considerably to degraded intersection operations.	Less than Significant	None required.	Less than Significant
TR-3: Transit ridership generated by the proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent transit capacity resulting unacceptable levels of transit service, or cause a substantial increase in delays or operating costs.	Less than Significant	None required.	Less than Significant
TR-6: The proposed project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	Less than Significant	None required.	Less than Significant
TR-8: The proposed project would not result in inadequate emergency access.	Less than Significant	None required.	Less than Significant
C. Air Quality	į		
AQ-2: Project operation would not conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to regional pollutants, either individually or cumulatively.	Less than Significant	None required.	Less than Significant
AQ-3: Traffic from project operation would not generate emissions that would conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to local pollutants, either individually or cumulatively.	Less than Significant	None required.	Less than Significant

350 Mission Street

TABLE S-1 (cont'd.) SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED 350 MISSION STREET PROJECT

Potential Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
AQ-4: Emissions from the proposed project's emergency generator would not conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to local pollutants, either individually or cumulatively.	Less than Significant	None required.	Less than Significant
D. Greenhouse Gases			
GG-1: Project operation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	None required.	Less than Significant
GG-2: The proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant	None required.	Less than Significant
E. Wind			
WI-1: The proposed project would not result in a new exceedance of the wind hazard criterion, either individually or cumulatively.	Less than Significant	None required.	Less than Significant
F. Shadow			
SH-1: The proposed project would not adversely affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, either individually or cumulatively.	Less than Significant	None required.	Less than Significant
SH-2: The proposed project would not substantially affect the usability of existing publicly accessible open space or outdoor recreation facilities or other public areas not under the jurisdiction of the Recreation and Park Department, either individually or cumulatively.	Less than Significant	None required.	Less than Significant

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boarding island in Fremont Street near Market Street, this impact is conservatively judged to be significant and unavoidable.

## Air Quality

Emissions from diesel equipment employed in the proposed project's construction would generate a cancer risk and concentrations of fine particulate (PM2.5) that in each case would exceed the Bay Area Air Quality Management District (BAAQMD)'s recently adopted (June 2010) thresholds of significance. (Previously, the BAAQMD did not recommend quantification of construction emissions.) Although mitigation, in the form of the use of diesel construction equipment meeting the California Air Resources Board/United States Environmental Protection Agency interim Tier 4 emissions standards could reduce both cancer risk and PM2.5 to levels below the BAAQMD significance thresholds (interim Tier 4 standards are up to 93 percent more restrictive than current emissions standards for off-road engines), this impact is conservatively assumed to remain significant and unavoidable, in light of the uncertainty concerning the actual diesel construction equipment to be used and the availability of cleaner diesel construction equipment in the near-term future. Cumulative construction impacts would occur from other projects in the vicinity, most notably including the new Transit Terminal across Mission Street from the project site, as well as several other projects in the area. Given the proximity of the new Transit Center to the 350 Mission Street project site, cumulative construction emissions could exceed the BAAQMD's significance criteria for cumulative impacts (100 in one million cancer risk non-cancer hazard index of 10, and a PM2.5 concentration of 0.8 micrograms per cubic meter). Despite emissions controls, it cannot be stated with certainty that the cancer risk or PM25 concentration would be reduced to below the significance thresholds, and the cumulative impact is thus, conservatively, significant and unavoidable.

No other significant impacts were identified that could not be mitigated to a less-than-significant level.

## D. Areas of Controversy to Be Resolved

On the basis of public comments on the NOP, potential areas of controversy and unresolved issues for this project include cumulative construction effects; cumulative shadow and wind impacts, including cumulative effects related to projects having been granted bulk exceptions; shadow and wind impacts on the project's own open space; consistency with the proposed Transit Center District Plan; displacement of Heald College; visual effects concerning blockage of the sky; economic impacts of housing demand generated by the project; construction noise; the adequacy of open space; LEED certification versus City requirements for energy and water conservation and other "green" features; seismic effects; flooding potential as a result of anticipated sea level rise; and effects related to potential soil and groundwater contamination. These issues are discussed in this EIR.

## F. Alternatives

## Alternative A – No Project Alternative

This alternative would entail no change to the site, which would remain in its existing condition. The existing building at 350 Mission Street would continue to operate for the foreseeable future.

Under this alternative, project impacts would not occur. This alternative would also avoid the proposed project's significant but mitigable effects with respect to conflicts between vehicles using the project parking garage and loading dock and other vehicles, including Golden Gate Transit buses, and with pedestrians, and would also avoid the project's significant but mitigable effect with respect to oversize trucks using the project loading dock. Cumulative construction-related transportation impacts could be significant, but this alternative would make no contribution to such impacts. There would be no significant impact on intersection level of service (LOS): although five study intersections that currently operate at LOS E or F would continue to do so, this alternative would make no contribution to this impact. With no construction, this alternative would avoid the project's significant, unmitigable construction-related air quality effects. With no excavation, this alternative would avoid the project's significant but mitigable effect on archeological resources. This alternative would avoid the project's lessthan-significant impacts on shadow and wind, and would result in no emissions of criteria pollutants, avoiding the project's less-than-significant impacts on air quality and greenhouse gases. Additionally, none of the other less-than-significant impacts identified in this Initial Study would occur under this alternative. This alternative would not result in any new significant impacts than those of the proposed project.

## Alternative B - Code-Complying Bulk Alternative

This alternative would entail development of a building the same height as the proposed project—a 24-story, 375-foot-tall building containing the same mix of uses as the proposed project: office space above ground-floor/mezzanine restaurant/retail/café space, and parking. However, unlike the project, this alternative would comply with the tower separation requirements of Planning Code Section 132.1(c) and with the bulk requirements of Code Section 270. As a result, this alternative would have setbacks above the building base, at a height of approximately 103 feet, and in the upper tower portion of the building, above a height of approximately 220 feet. The lower tower would have 15-foot setbacks from the north and east property lines, consistent with Section 132.1(c). To comply with Section 270, the topmost four floors would have additional setbacks of 15 feet, also on the north and east. The setbacks would reduce the amount of office space to 310,000 square feet (292,000 square feet of gross floor area), about 13 percent less than with the proposed project. This alternative would have the same 50-foot-tall ground-floor atrium, and approximately the same retail, restaurant space, and open space as the proposed project. Although compliant with Planning Code bulk and setback limits, this alternative would, like the project, require an exception to the Code's pedestrian wind requirements (Section 148) because this alternative would likewise not reduce all existing exceedances of the wind speed criteria for pedestrian and seating comfort. Two basement parking levels would be provided (one fewer than with the project), and approximately 45 parking spaces would be included, 16 fewer than with the project. Like the project, this

alternative would include 64 bicycle spaces. The floor area ratio of this alternative would be about 15.4:1, compared to 18:1 with the proposed project.

With 13 percent less office space than the proposed project, Alternative B would generate a comparable reduction in net new daily and peak-hour vehicle trips than the proposed project, incrementally reducing the project's less-than-significant traffic and transit impacts. This alternative, like the project, would not result in significant impacts on intersection level of service, although, as with the project, the large volume of cumulative Bay Bridge-bound traffic generated by other existing and proposed development would result in degradation of intersection levels of service at many area intersections, including all of the study intersections. This alternative would reduce, but not avoid, the project's significant impacts with respect to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage and loading dock on Fremont Street, and with respect to oversize trucks using the loading dock. However, as with the project, these impacts could be mitigated to a less-thansignificant level by relocating Golden Gate Transit bus stops, posting a garage/loading dock attendant, installing audible warning devices, limiting loading dock hours, and limiting the size of trucks using the dock. As with the project, cumulative construction-period effects on transportation, notably Golden Gate Transit buses, and construction-related air quality impacts would be significant and unmitigable. However, reduced traffic would reduce emissions and the project's less-than-significant emissions of criteria pollutants and greenhouse gases. The tower under this alternative would cast incrementally less shadow on surrounding streets and sidewalks due to the upper story setbacks; shadow impacts would be less than significant, as with the project. Wind effects of this alternative would be similar to or slightly less substantial than those of the proposed project because of the upper-story setbacks, and would be less than significant. Land use impacts would also be the same as those of the project, because the same uses would be developed. Other less-than-significant impacts discussed in the Initial Study would be similar in intensity or incrementally less substantial under this alternative than they would with the project. This alternative would not result in any new significant impacts that would not arise with the proposed project.

## Alternative C - No-Parking Alternative

This alternative would include the same development program as the proposed project (24-story tower with 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of open space, plus two off-street loading spaces and two service vehicle spaces), but would include no off-street parking, with the exception of the three spaces dedicated to shared electric vehicles (with battery charging capability). Like the project, this alternative would include 64 bicycle spaces. Excavation would be required for a single basement level to accommodate building mechanical equipment, car-share and bicycle parking, and fitness center. Above grade, this alternative would be the same as the proposed project, including the same 50-foot-tall combined ground floor and mezzanine that would include publicly accessible open space, retail, café, and restaurant space, and the building lobby.

The No Parking Alternative would avoid the proposed project's significant but mitigable effect related to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage, because this alternative would have no garage. However, because off-street loading

facilities would be comparable, this alternative would result in the same significant, but mitigable, impacts as would the proposed project with respect to potential conflicts between pedestrians and vehicles using the proposed loading dock via the proposed driveway on Fremont Street. With the same office floor area and the same restaurant/retail space, the No-Parking Alternative would have similar impacts related to the intensity of development as the proposed project. Trip generation would be the same as with the proposed project, because these calculations are based on development floor area, although distribution of project trips would be somewhat different than that of the project, because all persons driving to the site would have to park elsewhere. Like the proposed project, this alternative would not be expected to result in significant impacts on intersection level of service, as some vehicle trips would be destined to and from the building in any case. Cumulative traffic impacts would be essentially the same as those of the project and, like the project, would be less than significant, although, as with the project, the large volume of cumulative Bay Bridge-bound traffic generated by other existing and proposed development would result in degradation of intersection levels of service at many area intersections, including all of the study intersections. As with the project, cumulative construction-period effects on transportation, notably Golden Gate Transit buses, and construction-related air quality impacts would be significant and unmitigable. However, operational air quality impacts, which are based on trip generation and the size of the building, would be the same as those of the proposed project, and would be less than significant, as would greenhouse gas impacts. Because this alternative would develop the same above-grade building as the proposed project, shadow and wind effects (related to the building massing) would be the same as those of the proposed project, and would be less than significant. Land use impacts would also be the same as those of the project, because the same uses would be developed. Other lessthan-significant impacts discussed in the Initial Study would be the same under this alternative as with the project. This alternative would not result in any new significant impacts beyond those of the proposed project.

## **Environmentally Superior Alternative**

The No Project Alternative would result in no significant new traffic impacts or impacts related to air quality, noise, GHG emissions, aesthetics, historical resources, shadow, or wind. Thus, the No Project Alternative would be the Environmentally Superior Alternative. However, the CEQA Guidelines (Sec. 15126.6(e)) requires that if the No Project Alternative is identified as the environmentally superior alternative, a second alternative shall be identified as environmentally superior. The No Parking Alternative (Alternative C) would avoid the project's significant but mitigable effect related to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage, as well as the project's significant but mitigable effect with respect to oversize trucks. This alternative would not avoid the project's significant but mitigable impact related to potential conflicts between pedestrians and vehicles using the proposed loading dock via the proposed driveway on Fremont Street, although this impact would be mitigated by posting a loading dock attendant and limiting loading dock hours, as with the project. This alternative also would not avoid the project's significant, unmitigable cumulative construction-period effects on transportation, notably Golden Gate Transit buses, or significant, unavoidable construction-related air quality impacts. On balance, however, Alternative C is considered the "environmentally superior alternative" under CEQA.

## **CHAPTER I**

## Introduction

This environmental impact report (EIR) analyzes potential environmental effects associated with the proposed 350 Mission Street project, which involves the demolition of an existing four-story commercial building at the southwest corner of Fremont and Mission Streets in San Francisco, and construction of an approximately 375-foot-tall office building containing approximately 356,000 square feet of office space, about 6,600 square feet of restaurant and retail space, and three levels of basement parking (about 61 spaces). Further details regarding the proposed project components that form the basis for the EIR analysis are discussed in depth in Chapter II, Project Description.

## A. Environmental Review

The San Francisco Planning Department is serving as Lead Agency responsible for administering the environmental review for the proposed project. The California Environmental Quality Act (CEQA) requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR is reviewed and considered by the Lead Agency prior to a decision to approve, disapprove, or modify the proposed project. CEQA requires that the Lead Agency shall neither approve nor implement a project unless the project's significant environmental effects have been reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the expected impact, except when certain findings are made. If the Lead Agency approves a project that will result in the occurrence of significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing, demonstrate that its action is based on the EIR or other information in the record, and adopt a Statement of Overriding Considerations.

The project sponsor filed an application on February 15, 2008 (revision of a prior application submitted September 11, 2007), for the environmental evaluation of the proposed 350 Mission Street project. On June 2, 2010, the Planning Department sent a Notice of Preparation (NOP) to governmental agencies and organizations and persons interested in the project, for a 30-day review period ending July 2, 2010. The NOP and the Initial Study issued with the NOP are included as Appendix A of this EIR. The NOP requested agencies and interested parties to comment on environmental issues that should be addressed in the EIR. The comment letters received in response to the Initial Study and the NOP are available for review as part of Case File No. 2006.1524E. The Planning Department also conducted a public scoping

meeting, on June 22, 2010, to receive oral comments on the scope of the EIR. Comments requested that the EIR analyze the following:

- Construction-related effects, particularly if project construction were to overlap with other
  construction in the vicinity (project schedule must, therefore, be described with as much certainty
  as possible);
- Cumulative effects with respect to shadow and wind, and overall climate (including fog) in light of
  exceptions to *Planning Code* bulk requirements requested by the proposed project and previously
  granted to other Downtown high-rise projects;
- Other cumulative effects of bulk exceptions in light of the intentions behind the Downtown Plan's bulk controls (e.g., protection of sunlight on Downtown sidewalks) and the assumptions made in the Downtown Plan EIR;
- Shadow and wind impacts on the project's own open space, both on the ground floor and on the mezzanine, including whether the indoor open space will have access to sunlight;
- Consistency with the proposed Transit Center District Plan;
- Displacement of Heald College, the existing primary tenant of the building at 350 Mission Street, including the need for Heald College to be transit-accessible;
- Visual effects, including areas of sky currently visible that would be "filled in" by the proposed project;
- Economic impacts of housing demand generated by project employees, including income levels of new employees at the project and the resulting affordability of housing demanded;
- Noise effects of construction on nearby residential units, including cumulative construction noise;
- Adequacy of existing and proposed open space to accommodate the proposed project, including effects of shading of parks and open space due to other projects;
- A comparison of the project's proposed LEED certification versus City requirements for energy and water conservation and other "green" features;
- Effects on surrounding streets and sidewalks of groundshaking in an earthquake;
- Flooding potential as a result of anticipated sea level rise; and
- Effects related to potential soil and groundwater contamination beneath the site.

The City has considered the public comments made by the public in preparing the Draft EIR for the proposed project. Because some of the comments address specific information provided in the Initial Study, brief responses to those comments are provided herein in Section IV.G, Initial Study Issues.

## **B. Purpose of This EIR**

This EIR is intended as an informational document, that in and of itself does not determine whether a project will be approved, but aids the planning and decision-making process by disclosing the potential for significant and adverse impacts. In conformance with CEQA, California Public Resources Code, Section 21000 *et. seq.*, this EIR provides objective information addressing the environmental consequences of the project and identifies possible means of reducing or avoiding its potentially significant impacts.

Specific technical studies prepared for the environmental analysis of the 350 Mission Street project include a transportation study by AECOM (2010); air quality analyses by ENVIRON International (2010) and Environmental Science Associates (2010); wind analysis by RWDI (2010); and shadow analysis by CADP (2010). Additionally, the Initial Study (Appendix A) relied upon studies including a geotechnical investigation (Treadwell & Rollo, 2008); a Phase I environmental site assessment (Lowney Associates, 1997) and update thereto (Lowney Associates, 2005); and an Environmental Site Characterization Work Plan (Treadwell & Rollo, 2010). These technical studies are detailed data reports and are available for review with the San Francisco Planning Department, in Case File No. 2006.1524E.

The state CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 *et. seq.*) help define the role and expectations of this EIR as follows:

- Information Document. An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency (Section 15121(a)).
- Standards for Adequacy of an EIR. An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information, which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

The CEQA Guidelines, Section 15382, define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project...." Therefore, in identifying the significant impacts of the project, this EIR concentrates on its substantial physical effects and upon mitigation measures to avoid, reduce, or otherwise alleviate those effects.

## C. Organization of the Draft EIR

This Draft EIR has been organized as follows:

- Summary. This chapter summarizes the EIR by providing a concise overview of the project, including the project description, the environmental impacts that would result from the project, mitigation measures identified to reduce or eliminate these impacts, and alternatives to the proposed project.
- Chapter 1, Introduction. This chapter (above) and the contents herein, including a discussion of Environmental Review, a summary of the comments received on the scope of the EIR, and the organization of the EIR.

- Chapter 2, Project Description. This chapter discusses the project objectives, provides background data on the project location, describes the operational and physical characteristics of the Master Plan, and identifies required project approvals.
- Chapter 3, Plans and Policies. This chapter provides a summary of the applicable plans, policies, and regulations of the City and County of San Francisco (City), and regional, state, and federal agencies that have policy and regulatory control over the project site and discusses the proposed project's consistency with those policies.
- Chapter 4, Environmental Setting and Impacts. This chapter describes the project's existing setting, environmental impacts, and cumulative impacts with respect to transportation, air quality, greenhouse gas emissions, wind, and shadow. Each environmental topic is discussed in a separate section within this chapter. (Other topics in the Planning Department's CEQA checklist were analyzed in the Initial Study and found to result in less-than-significant impacts. The Initial Study is included in Appendix A
- Chapter 5, Other CEQA Considerations. This chapter addresses any growth-inducement that would result from the proposed project, the significant environmental effects that cannot be mitigated to a less-than-significant level, significant irreversible changes that would result if the project is implemented, and any areas of controversy left to be resolved.
- Chapter 6, Alternatives. This chapter presents alternatives to the proposed project, including the No Project Alternative, the Code-Complying Bulk Alternative, and the No Parking Alternative.
- Appendices.

## D. Public Participation

The state CEQA Guidelines and Chapter 31 of the San Francisco Administrative Code encourage public participation in the planning and environmental review processes. The City will provide opportunities for the public to present comments and concerns regarding the CEQA and planning process. These opportunities will occur during a public review and comment period and a public hearing before the San Francisco Planning Commission. Written public comments may be submitted to the Planning Department during the specified public review and comment period (indicated on the cover of this DEIR), and written and oral comments may be presented at public hearings concerning the project.

## **CHAPTER II**

## **Project Description**

The project sponsor, GLL US Office, L.P., proposes to demolish the existing four-story building at 350 Mission Street and construct a 24-story, approximately 375-foot-tall (including 20-foot-tall mechanical space) tower containing approximately 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of publicly accessible open space. Retail and restaurant spaces would include a coffee bar/café and a retail store area on the ground floor and a restaurant and conference space on the mezzanine. A driveway on Fremont Street would provide access to two loading and two service parking spaces on the ground floor and 61 parking spaces and 64 bike parking spaces in three subgrade levels. The building would be constructed to standards required for a LEED (Leadership in Energy and Environmental Design) Gold rating.<sup>1</sup>

## A. Site Location and Project Characteristics

## Site Location

The project site, located at 350 Mission Street, on the northeast corner of Mission and Fremont Streets, is on Assessor's Block 3710, Lot 17. <sup>2</sup> The site is within the C-3-O Downtown Office Use District and the 550-S Height and Bulk District (550 foot height limit; setbacks required for floors above building "base"; permitted floor area ratio is 9.0:1; FAR of up to 18.0:1 is permitted with transfer of development rights). The approximately 19,000-square-foot project site is generally flat with an elevation of 3 feet, SFD at the corner of Mission and Fremont Streets.<sup>3</sup> The site, which has frontages on Mission and Fremont Streets, is currently fully occupied by a four-story, approximately 60-foot-tall building providing about 95,000 square feet of floor area, including the 13,000-square-foot basement. Approximately 72,000 square feet of office space, currently in educational use by Heald College, and 10,000 square feet of retail space occupy the existing building. No off-street parking spaces or loading spaces are currently provided. The

The LEED Building Rating System is a third-party certification program and benchmark for the design, construction and operation of green buildings. It provides building designers, owners and operators with tools to assess a project's performance with respect to environmental responsibility. More information about the LEED rating system can be obtained at <a href="http://www.usgbc.org/DisplayPage.aspx?CategoryID=19">http://www.usgbc.org/DisplayPage.aspx?CategoryID=19</a>, accessed on April 21, 2008.

Consistent with San Francisco practice, Market Street and streets parallel are considered east-west streets. Thus, Mission Street runs east-west, and Fremont Street runs north-south.

San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum. In San Francisco, elevation in the 1929 USGS datum is approximately 2.7 feet lower than the corresponding elevation current 1988 North American Vertical Datum.

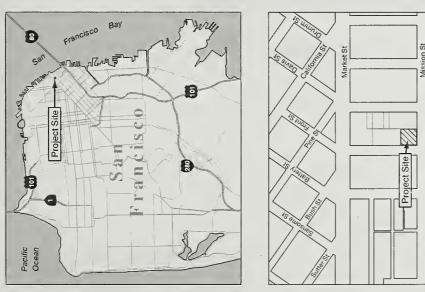
building was built in 1923 and is not historically significant. There are nine existing street trees along the Fremont and Mission Street frontages. **Figure 1** shows the project location.

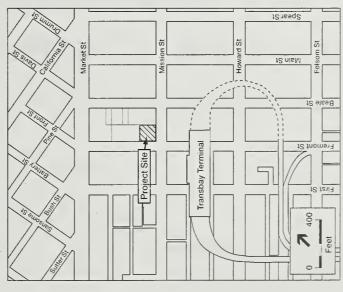
## **Project Characteristics**

The proposed project would consist of a 24-story, approximately 375-foot-tall office tower with office uses occupying approximately 356,000 square feet on floors 5 through 24 (the building would have no floor 13, nor floors 3 or 4). The ground floor would have a height of 50 feet, equaling approximately 3 to 4 stories, and a mezzanine level would be incorporated within this space. Approximately 6,600 square feet of retail and restaurant space would be divided into four spaces on the ground floor and the mezzanine. These spaces would include a 1,000-square-foot retail space on the ground floor facing Mission Street, a small coffee bar/café near the northwest corner of the ground-floor lobby, and an approximately 4,600-squarefoot restaurant space with a separately demised conference/dining room on the mezzanine. Pedestrian entrances would be located on the Fremont and Mission Street frontages and would open to a 50-foot-tall lobby, which would include part of the mezzanine floor that would be open to the ground floor. The lobby would function, in part, as an enclosed publicly accessible open space, including internal access to the retail space and a wide stairway to the mezzanine that would double as public amphitheater style seating. The approximately 35-foot-tall mezzanine floor would be occupied mostly by the restaurant/conference space but would include about 2,200 square feet of enclosed public seating at the top of the stairway. The mezzanine level would cover the north and east portion of the ground floor and leave the southwest lobby space open to the entire 50-foot-tall volume.

Vehicle and freight loading access would be via an approximately 33-foot-wide two-way driveway on Fremont Street on the northwest corner of the project site. The northern portion of the ground floor would include four off-street freight loading spaces (two truck and two service van), a 30-foot-diameter turntable for large vehicle turnaround, and building service spaces including trash and storage facilities. Three basement levels would provide 61 independently accessed parking spaces, including three spaces dedicated to shared electric vehicles (with battery charging capability); 64 bicycle parking spaces; building services and mechanical space; and a fitness center for use by building tenants, along with eight showers and lockers that could also be used by bicyclists. **Figures 2 and 3**, pp. 8 and 9, depict the proposed ground floor and mezzanine plans, respectively. **Figure 4**, p. 10, depicts a representative upperstory floor plan. The rooftop mechanical space would contain elevator machinery, building heating and cooling equipment, electrical equipment, and a diesel-powered emergency generator, rated at 800 kilowatts.

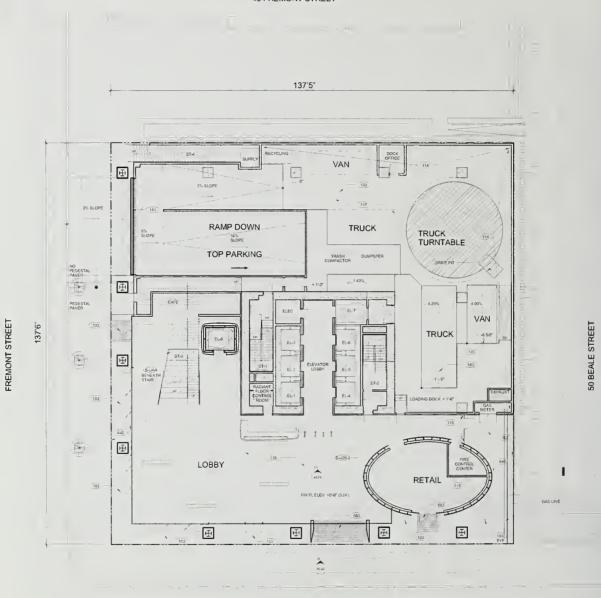
The building would contain approximately 340,000 "gross square feet" (square feet of gross floor area), as measured in accordance with the *San Francisco Planning Code*, Section 102.9, consisting almost entirely of office space. To meet the *Planning Code* open space requirement of one square foot per 50 square feet of gross floor area in the C-3 District, a total of 6,800 square feet of publicly accessible open space would be required. For the purposes of this requirement, the enclosed lobby and public seating areas would be considered an "indoor park." The *Planning Code* (Section 138) and Downtown Plan element of the





SOURCE: ESA

### 45 FREMONT STREET

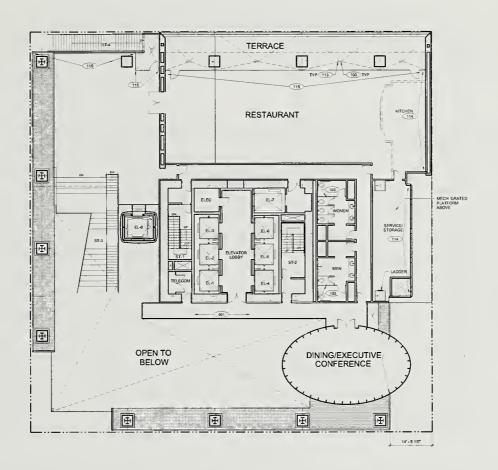




MISSION STREET

SOURCE: Skidmore, Owings & Merrill LLP

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Figure 2
Ground Floor Plan

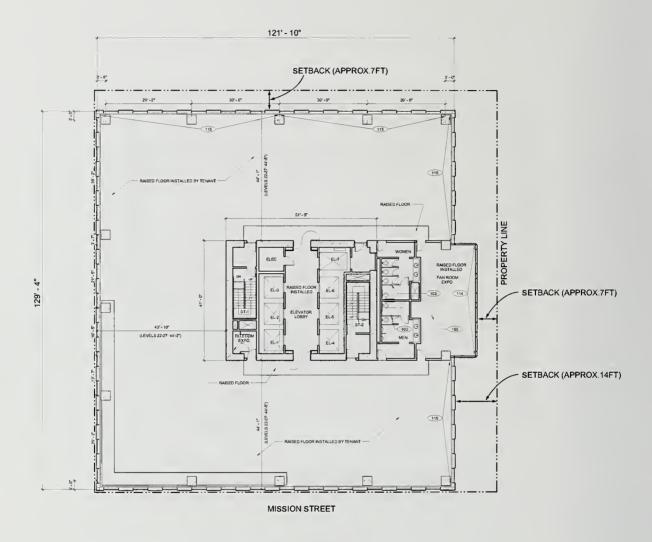




SOURCE: Skidmore, Owings & Merrill LLP

Case No. 2006.1524E: 350 Mission Street . 207037

Figure 3 Mezzanine (Second Floor) Plan





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**Figure 4** Typical Upper Level Plan San Francisco General Plan consider an enclosed indoor park to be one form of "open space" that may be used for the purposes of satisfying this requirement, assuming applicable guidelines are met.<sup>4</sup>

Table 1, p. 12, summarizes the characteristics of the project and compliance with certain applicable *Planning Code* requirements for downtown high-rise buildings.

The ground floor lobby, stairway, and adjacent exterior open space (mezzanine terrace) would contribute approximately 4,755 square feet of open space. On the mezzanine, at the top of the stairway, the project would provide a public seating area of approximately 2,205 square feet. Thus, the project would exceed the *Planning Code* Section 102.9 requirements with the provision of roughly 6,960 square feet of publically accessible open space.

The second and third basement levels would include approximately 55 marked parking spaces (capacity for about 80 vehicles with valet parking operations). The first basement level would have three dedicated parking spaces for electric vehicles (with battery charging capability) and three disabled-accessible spaces (which would meet the requirement of *Planning Code* Section 155(i)), for a total of 61 marked spaces. The project would provide a minimum of 64 stalls for bicycle parking, which would exceed the requirement of Planning Code Section 155.4(d).<sup>5</sup> The proposed floor area devoted to off-street parking (approximately 23,540 square feet) would be within the maximum permitted of seven percent of building gross floor area pursuant to Planning Code Section 151.1. For purposes of this calculation, parking area includes spaces and aisles and excludes entrance and exit driveways and ramps. Therefore, the proposed project would comply with Section 151.1. Four off-street loading spaces (two truck and two service van), also accessible from Fremont Street, would meet the Planning Code requirement under Section 152.1 (see Approvals Required, below). However, the proposed project would require an exception, pursuant to Planning Code Section 309, from the Code's prohibition on curb cuts along Transit Preferential Streets where an alternative frontage is available (Section 155(r)(4)), for the proposed garage/loading dock curb cut on Fremont Street. (Both Fremont and Mission Streets are identified as Transit Preferential Streets in the General Plan Transportation Element.)

According to *Planning Code* Section 270, which implements the direction for building massing contained in the Downtown Plan element of the *San Francisco General Plan*, buildings over 160 feet in height are considered to have a base, lower tower and upper tower. The base, which may not exceed a height of 1.25 times the width of the principal adjacent street, has no plan or area restrictions under this section but is required to be visually delineated from the lower and upper towers through a setback, cornice line, or

The Downtown Plan (Table 1, Guidelines for Downtown Open Space) states that an Indoor Park should have, among other qualities, at least one street-facing glass wall and be accessible from street level; contain at least 1,000 sq. ft. and be at least 20 feet tall; provide food service and adequate seating, sunlight, and ventilation; and include design features.

The draft Transit Center District Plan (published November 2009) proposes to amend Section 155.4 of the Planning Code to increase number of required onsite secure bicycle parking spaces for commercial buildings to one space for every 6,000 gsf of office space. This would increase the required number of bicycle spaces for the project to approximately 55 spaces.

2 spaces + 2 van spaces c

64 6.5 feet <sup>j</sup>

TABLE 1
PROJECT CHARACTERISTICS AND PLANNING CODE COMPLIANCE

Proposed Use	Description	Gross Building Area (GSF)	Gross Floor Area (GFA) <sup>a</sup>
Office	22 stories	356,000 sq. ft.	340,000 sq. ft.
Retail / Restaurant	Ground floor & Mezzanine (part)	6,600 sq. ft.	0
Parking <sup>b</sup>	61 spaces	23,540 sq. ft.	0
Bldg. services	Basement & mechanical	62,820 sq. ft.	0
Loading <sup>c</sup>	2 spaces + 2 van spaces	6,640 sq. ft.	0
Lobby/Interior open space	Ground Floor & Mezz. (part)	9,600 sq. ft.	0
Mech. Penthouse	Equipment room	4,300 sq. ft.	0
TOTAL	_	469,500 sq. ft.	340,000 sq. ft.
Site area		18,909 sq. ft.	_
Parameter		Permitted	Proposed
Height (feet) <sup>d</sup>		550 feet	375 feet 24
Height (stories)		-	+ 3 bsmt. + 2 mech. p'hse.
Bulk (Sec. 270(e))			
Lower Tower (103 feet e to 22	20 feet <sup>f</sup> in height)		
Maximum horizontal dimension		160 feet	129 ft., 4 in.
Maximum diagonal dimension		190 feet	177 ft., 10 in.
Maximum average floor plate		17,000 sq. ft.	15,020 sq. ft.
Maximum floor size, any lower-tower floor		20,000 sq. ft.	15,020 sq. ft.
Upper Tower (above 220 feet	in height) <sup>g</sup>		
Maximum horizontal dimension		130 feet	129 ft., 4 in.
Maximum average diagonal dimension		160 feet	177 ft., 10 in.
. Maximum average floor plate		12,000 sq. ft.	15,020 sq. ft.
Maximum floor size, any upper-tower floor		17,000 sq. ft.	15,020 sq. ft.
Minimum volume reduction required in upper tower (compared to straight extension of lower tower)		20 percent	0 percent
Floor Area Ratio (Secs. 124 & 128) h 18.0:1			18.0:1
Off-Street Vehicle Parking (Sec. 151.1)		7 percent of gross floor area, or 23,870 sq. ft. max.	23,540 sq. ft.
Parameter Required			Proposed
Open Space (Sec. 138)		6,800 sq. ft.	6,960 sq. ft.

### NOTE: All figures rounded.

Off-Street Freight Loading (Sec. 152.1)

Separation of Towers (Sec. 132.1(c))

Bicycle Parking (Sec. 155.4)

<sup>a</sup> Gross floor area (GFA) is calculated for *Planning Code* compliance purposes (per Sec. 102.9) and excludes certain portions of the building, including accessory parking and loading space, mechanical and building storage space, ground-floor lobby space and 5,000 gross square feet of ground-floor and mezzanine "convenience" retail and restaurant space, per use. Office GFA excludes aggregate of 27,500 sq. ft. of mechanical space at all office floors.

3

12

21 feet i

- b Space for approximately 80 vehicles would be provided if valet parking were offered.
- <sup>c</sup> Planning Code Section 153(a)(6) allows the substitution in C-3 Districts of two service vehicle spaces for each required off-street freight loading space, provided that a minimum of 50 percent of the required number of spaces are provided for freight loading. Therefore, the project would meet the Code requirement of three spaces.
- <sup>d</sup> Proposed height includes mechanical penthouse and screen (approximately 20 feet).
- <sup>e</sup> Building base height, measured according to the *Planning Code*, is 1.25 times the width of Mission Street (82.5 feet), or 103 feet.
- f Lower tower, measured according to the Planning Code, extends from top of base to approximately 220 feet.
- g Dimensions in excess of permitted maximums require exceptions under *Planning Code* Sections 309 and 272.
- h Basic permitted floor area ratio is 9.0:1; FAR of up to 18.0:1 is permitted with transfer of development rights, proposed as part of project.
- i Minimum setback required from center line of abutting street(s) and from interior property line(s) at height of 375 feet, at top of building crown.
- Project's minimum setback measured at northern property line.

SOURCE: Skidmore, Owings & Merrill LLP

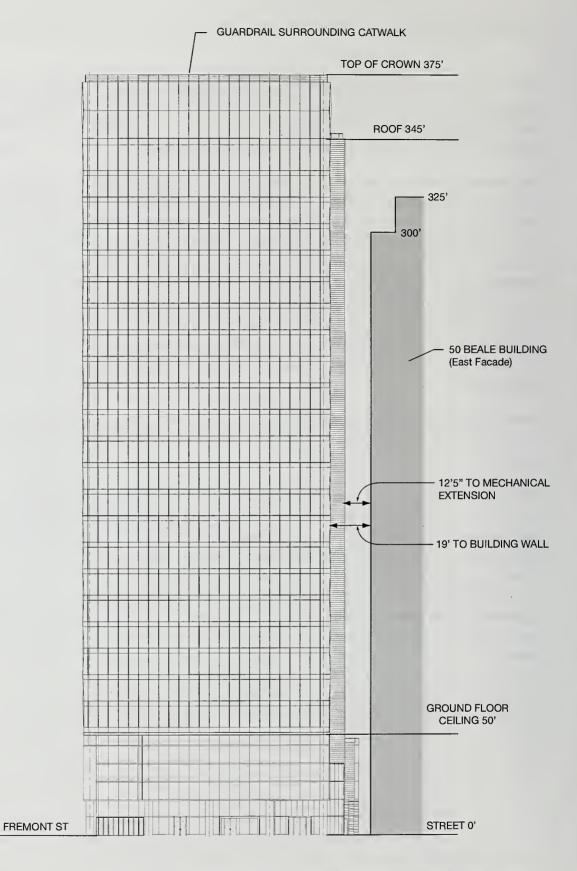
other means. As Mission Street is the principal adjacent street and is 82.5 feet wide, the base height for this project is considered to be a maximum of 103 feet tall. As proposed, the project building would be generally rectilinear in shape with an approximately 55-foot-tall building base physically distinguished from the remaining 295-foot-tall office tower (plus 20-foot-tall mechanical space).

The combined ground floor and mezzanine levels would be the project's primary distinguishing feature in terms of articulation and materials. In particular, at the corner of Mission and Fremont Streets, the ground floor and mezzanine together would serve as an approximately 50-foot-tall atrium, accessible via doors on Mission and Fremont Streets, and through a folding glass-panel door system, also on both facades near the corner of Mission and Fremont Streets; large portions of the atrium would be open to the sidewalk in good weather, as the folding panel doors would remain open, providing pedestrian access along almost 75 feet of sidewalk frontage. Publicly accessible open space would be located on both the ground floor and mezzanine, and the atrium would have large expanses of clear glass. Behind the glass, columns would rise the full height of the atrium. A glazed, oval-shaped enclosure near the southeast corner of the atrium would house retail space on the ground floor and a dining/conference room at the mezzanine level.

Above the atrium, the project's façade would be clad in an energy-efficient glass curtain wall. Figure 5, p. 14, and Figure 6, p. 15, present the principal Mission and Fremont Street elevations of the proposed project.

The project's office component (spanning from approximately 55 to 375 feet in height) would have no setbacks from the property line along the west (Fremont Street) and south (Mission Street) façades. The east façade would generally be set back approximately 14 feet from the east property line, except for a 40-foot-wide mechanical element running from levels three through 24 that would extend approximately 7.5 feet into this space, and thus would be set back only approximately 6.5 feet from the east property line. The adjacent building at 50 Beale Street is about 6 feet from the property line, meaning the separation between the two buildings would be about 12.5 feet. Also, the north façade would be set back approximately 6.5 feet from the northern property line. Planning Code Section 132.1(c) requires a 15-foot setback from the top of the building base to a height of 300 feet, increasing to 21 feet at the 375-foot top of the building crown, or parapet. Therefore, the project would not conform to the required setback from the east and north property lines pursuant to Section 132.1(c), and an exception would be required, as is permitted under Planning Code Section 309. The tower would have a maximum plan length of approximately 130 feet and a maximum diagonal dimension approximately 180 feet. The average floor size, as measured in accordance with the *Planning Code* Section 102.9, would be about 15,000 square feet. These dimensions would be consistent with the bulk limits of *Planning Code* Section 270 for the building base (up to 103 feet in height) and lower tower (103 feet to 220 feet in height), but would exceed the permitted diagonal dimension and average floor area for the upper tower (above 220 feet in height). Accordingly, the project would require exceptions to the upper tower bulk limits, as is permitted under Section 309. Figure 7, p. 16, shows the requested tower setback and bulk exceptions.

The project includes demolition of the four-story building currently occupying the project site. The existing building contains approximately 95,000 square feet of office (currently occupied with educational

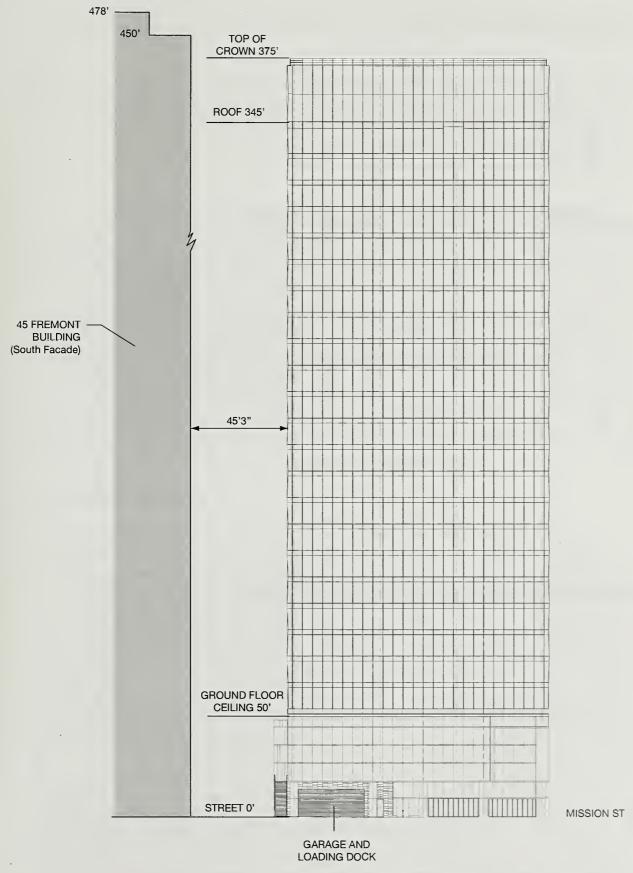


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14

Figure 5
Mission Street (South) Elevation

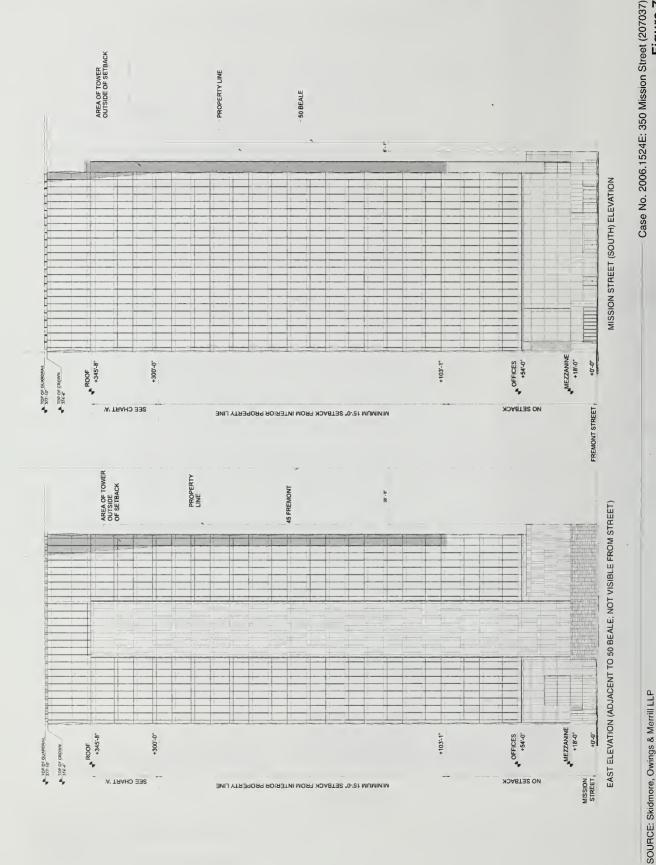
SOURCE: Skidmore, Owings & Merrill, LLP



SOURCE: Skidmore, Owings & Merrill, LLP

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Figure 6



uses), retail and accessory uses, including a basement. It contains no parking facilities and fully occupies the lot. The building, which was built in 1923, is not currently listed in the California Register of Historical Resources nor is it identified as significant in a local register, such as Article 10 and Article 11 of the *Planning Code*. Tenants in the existing building include Heald College, Starbucks, Noah's Bagels, Lee's Deli, Happy Donuts and Powersource Juice Bar. Approximately 150 full- and part-time employees work at the project site.<sup>6</sup>

The proposed project would be constructed atop a mat foundation, and is proposed to be constructed as a poured-in-place, reinforced concrete building. Excavation for the three basement levels and the foundation would extend to approximately 50 feet below grade, and would require removal of approximately 35,000 cubic yards of soil.

The proposed project would include planting of new street trees on the Fremont and Mission Street project frontages, in compliance with *Planning Code* Section 143, which requires planting a minimum of one 24-inch-box tree for every 20 feet of project frontage. (Any existing street trees removed for construction would be replaced at the same ratio.)

Project construction would take about approximately 22 months, and occupancy is anticipated in 2013. Construction costs are currently estimated at approximately \$85 million. The project architect is Skidmore, Owings & Merrill LLP.

# **B. Project Setting**

The proposed project is within San Francisco's Financial District, which functions as the densely developed center of commerce and employment for the city as well as for the nine county Bay Area. The site is within the C-3-O Downtown Office District, on Assessor's Block 3710, Lot 17. The project site is within the 550-S Height and Bulk district, which has a height limit of 550 feet and bulk limits for the lower and upper towers requiring setbacks so that the floor area decreases as the building height increases. The C-3-O district is described in *Planning Code* Section 210.3 as consisting primarily of high-quality office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales (including restaurant) and personal services uses. The C-3-O District permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted with transfer of development rights (TDR), and the project, as proposed, would have a FAR of 18:1.

Heald College has indicated, in an Abbreviated Institutional Master Plan dated June 18, 2010, and on file with the Planning Department, that the institution is moving its San Francisco campus from 350 Mission Street to 875 Howard Street. According to Heald College staff, this move will occur around the end of 2010.

Transfer of Development Rights is the process through which units of gross floor area may be transferred, pursuant to the provisions of this Section and Article 11 of the Planning Code, from a Transfer Lot to increase the allowable gross floor area of a development on a Development Lot for the purpose of preservation of buildings and districts of architectural, historical, and aesthetic importance in the C-3 (Downtown Commercial Office) District (Sec. 128).

The project site is flat; elevation at the site is approximately 3 feet, SFD.<sup>8</sup> The project vicinity is also flat and level, although the ground level rises in elevation southward towards Rincon Hill, which begins its slope upward at Howard Street and rises to over 100 feet in elevation less than one-half mile from the project site to the south. Because the original San Francisco Bay shoreline once reached to the corner of First and Mission Streets, the project site is located on artificial fill used in the early years of City growth. Accordingly, the project site is within the "Maher area" (bayward of the historic high tide line), an area in which soil investigation is required per Article 20 of the San Francisco Public Works Code and Article 22A of the Public Health Code (see Section E.15, Hazards, in the Initial Study [Appendix A]).

Development in the vicinity consists primarily of office space above ground-floor retail stores. The block on which the project site is located contains three high-rise office buildings, in addition to the four-story office and retail building on the project site. There are also office towers to the west. The Transbay Transit Terminal is located diagonally across the intersection of Fremont and Mission Streets from the project site. Immediately south of the site, across Mission Street, is the newly constructed Millennium residential tower.

The nearest open spaces to the project site include Justin Herman Plaza (on the Embarcadero to the north and south of Market Streets), Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets), Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along the Embarcadero). There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west.

The project vicinity is the subject of the draft Transit Center District Plan (TCDP), a comprehensive plan for the southern portion of San Francisco's downtown Financial District, encompassing approximately 145 acres roughly bounded by Market Street, the Embarcadero, Folsom Street, and Third Street. The TCDP would result in new planning policies and controls for land use; urban form, including building height and design; street network modifications/public realm improvements; historic preservation; and district sustainability, including the potential creation of a district-wide combined heat and power (cogeneration) system, the enhancement of green building standards in the district, and reductions in potable water use and stormwater runoff. It would allow for height limit increases in subareas composed of multiple parcels or blocks within the area. The TCDP builds upon other plans in the vicinity, described below:

• Transbay Transit Center/Rail Extension – The Transbay Transit Center will replace the existing Transbay Terminal with a new modern multimodal Transit Center that will serve multiple local and regional transportation systems under one roof and anchor the Transbay Redevelopment Area. The new terminal will replace the existing Transbay Terminal as the terminal for service provided by the San Francisco Municipal Railway (Muni), AC Transit, SamTrans, and Golden Gate Transit, along with Greyhound bus service. Assuming that additional funding is secured, the Transit Center

<sup>8</sup> SFD – San Francisco Datum (see footnote 3, p. 5).

also would accommodate an underground extension of the Caltrain line as well as the future California High-Speed Rail from Fourth and King Streets to the new terminal. The new Transit Center and the rail extension were analyzed in an EIS/EIR prepared in 2004 and subsequently amended.<sup>9</sup>

- 2005 Transbay Redevelopment Plan The Transbay Redevelopment Project Area, created in 2005, encompasses about 55 acres and is generally bounded by Mission, Main, Folsom, and Second Streets. The Redevelopment Plan Area contains the existing Transbay Terminal and access ramps, as well as a number of vacant and underutilized properties and older buildings, many of which are substantially deteriorated and/or constructed of unreinforced masonry. The Redevelopment Plan is intended to address these conditions of "blight." The Plan sets forth various projects and programs that will be funded with tax increment dollars over the life of the Redevelopment Plan. Proceeds from the sale of the property and approximately \$178 million of the net tax increment will be pledged to the Transbay Joint Powers Authority to help pay the cost of rebuilding the Transbay Terminal into a regional transit hub (the Transit Center). The Plan also calls for new residential development on parcels along Folsom Street formerly occupied by the Embarcadero Freeway ramps, as well as office space adjacent to the new terminal (the Transit Tower). The Transbay Redevelopment Plan was also analyzed in the previously-referenced EIR for the Transbay Transit Center/Rail Extension.
- Rincon Hill Plan The Rincon Hill Plan, adopted in 2005, encourages high-density residential development and greater building heights in the area between Folsom Street and the Bay Bridge. The goal of the Plan is to encourage the ongoing transformation of the area into a new mixed-use, high-density residential neighborhood adjacent to the downtown, with both strong urban design controls and implementing mechanisms to fund the necessary public infrastructure, including open space, streets, community facilities, and affordable housing. Together with plans for the Transbay Redevelopment Plan, the Rincon Hill Plan will create housing for as many as 20,000 new residents. The Plan calls for location of retail shops and neighborhood services along Folsom Street, and transformation of Main, Beale, and Spear Streets into traffic-calmed, landscaped residential streets lined with townhouses and front doors. Funding is also included, from development impact fees, for the acquisition and development of open space in the district.

In addition, several high-rise and/or sizable projects are proposed within the project vicinity: the Transbay Joint Powers Authority (TJPA) proposes to construct an approximately 1,000-foot-tall tower (plus potential sculptural elements to 1,200 feet) adjacent to the planned new Transbay Transit Center (replacement terminal) on Mission Street, which would be directly across the street from the project site,

U.S. Department of Transportation Federal Transit Administration, the City and County of San Francisco, Peninsula Corridor Joint Powers Board, and San Francisco Redevelopment Agency, Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project Final Environmental Impact Statement/Environmental Impact Report and Section 4(f) Evaluation, June 2004. Available for review by appointment at the Planning Department, 1650 Mission Street, Suite 400, in Case No 2007.0558E and also available at <a href="http://www.transbaycenter.org/TransBay/content.aspx?id=114">http://www.transbaycenter.org/TransBay/content.aspx?id=114</a>. Amendments to the EIS/EIR are available at: <a href="http://www.transbaycenter.org/TransBay/content.aspx?id=67">http://www.transbaycenter.org/TransBay/content.aspx?id=67</a>.

and is also considering high-rise development of a second TJPA-owned parcel on Howard Street between First and Second Streets. The Planning Department either has applications on file, or has had preliminary discussions with developers, for towers at 50 First Street (two towers, an 850-foot, office tower fronting on First Street and a 550-foot residential tower fronting on Mission Street, along with retail space on the ground floor of each), 222 Second Street (26-story, 350-foot-tall office building), 181 Fremont Street (877foot, 65-story residential and office tower), 41 Tehama Street (400-foot, 39-story residential building), the Palace Hotel at New Montgomery and Market Streets (690-foot, 60-story residential tower at the nonhistoric southwestern corner of the existing hotel), and the southwest corner of Third and Folsom Streets (mixed-use project potentially containing two towers, along with hotel and convention space). With the exception of the 222 Second Street project, the foregoing proposals would require adoption, as is currently proposed under the draft Transit Center District plan, of rezoning to permit increased height limits. In addition, a 550-foot-tall, residential tower has been proposed at the northeast corner of Third and Mission Streets that would also rehabilitate the historic Aronson Building and provide a new location for the Mexican Museum, while the San Francisco Museum of Modern Art has announced plans for an expansion structure—which may include a tower—on Howard Street, southeast of the existing museum building on Third Street. Beyond these proposed projects, an office building has been approved and construction started and then halted at 535 Mission Street, while there is a long-approved 23-story office building at 524 Howard Street. Additionally, Golden Gate University has publicly discussed future plans for a tower at its Mission Street campus.

# C. Project Sponsor's Objectives

The objectives of the project sponsor include the following:

- Construct a LEED Gold, Class A office building that exemplifies sustainable design principles and minimizes the building's impact on the environment;
- Create a building with unique, world-class architecture that will complement buildings and planned public improvements in the area;
- Construct the maximum amount of office space allowed under the current floor area ratio limit, thereby promoting the General Plan goal of concentrating growth in a compact downtown core that is well-served by transit;
- Enhance the pedestrian environment with active retail spaces and an inviting public open space at the building's ground and mezzanine levels;
- Encourage the use of alternative transportation by including car-share parking, electric vehicle charging stations, bicycle parking and showers for bike commuters;
- Provide accessory automobile parking in an amount sufficient to meet the needs of prospective office tenants and their visitors; and
- Provide an adequate return for the building's investors.

## D. Intended Uses of the EIR

This is a project-specific EIR, intended to provide review under CEQA for the proposed 350 Mission Street project, to analyze potential environmental impacts of the proposed project and identify mitigation

measures where those impacts are significant, and to address cumulative impacts to which the proposed project could make a meaningful contribution. No other projects are intended to receive CEQA review through the use of this EIR.

# **Approvals Required**

The proposed project's office and retail uses are principal permitted uses in the C-3-O District. At 375 feet in height (including 20-foot mechanical penthouse), the proposed project would also be consistent with the site's height limit of 550 feet. Therefore, no special approvals are required with respect to land use or building height.

The project would require Planning Commission review and approval under Section 309, Permit Review in C-3 Districts, because the project would exceed 50,000 gross square feet and because the sponsor would seek exceptions, pursuant to Section 309, to the following *Planning Code* sections: bulk requirements (Section 270) because the upper tower portion of the building (above a height of 220 feet) would exceed the maximum permitted floor area and diagonal plan dimension; and the requirement for separation of towers (Section 132.1(c)). The *Code* requirement, based on the building's 375-foot height, is a minimum tower setback of up to 21 feet from the centerline of adjacent street(s) and from interior property line(s). The project would have a setback of approximately 14 feet from the eastern interior property line (adjacent to the building at 50 Beale Street), but this setback would be penetrated by a 40-foot-wide mechanical element extending approximately 7.5 feet into this space. The project would have a setback of approximately 6.5 feet from the northern interior property line (adjacent to the building at 45 Fremont Street). The project would comply with the setback requirement from abutting streets.<sup>10</sup>

In addition, the project sponsor would seek an exception to the *Code's* ground-level wind current requirements (Section 148) because the project would not reduce all existing exceedances of the wind speed criteria for pedestrian and seating comfort and would result in a net increase of one exceedance of the pedestrian comfort criterion. Section 309 also permits the imposition of certain conditions in regard to such matters as a project's siting and design; view, parking, traffic and transit effects; energy consumption; pedestrian environment; and other matters. The proposed project would also be subject to review and approval pursuant to *Planning Code* Section 321 (Office Development: Annual Limit) and Sections 146 and 295, concerning shadow impacts.

The project would have an approximately 33-foot-wide driveway on Fremont Street to provide access to vehicle parking and off-street loading areas. Under *Planning Code* Section 155(s)(5)(A), the maximum combined parking-loading driveway width is 27 feet. Therefore, the proposed project would require a variance from this requirement.

The project would be required to comply with the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 *et. seq.*), which would require that the project sponsor either fund the construction of 92 affordable

The setbacks from Fremont and Mission Streets, each of which is 82 feet, 6 inches in width, would be more than 41 feet.

housing units<sup>11</sup> or pay an in-lieu fee to the City in the amount of \$19.89 per gross square foot of office space.

As a downtown office project, the project would also be subject to certain other *Planning Code* sections beyond those noted above: Section 138.1, pedestrian streetscape improvements; Section 139, downtown park fees; Section 143, street trees; Section 149, public art requirements; Section 163, transportation management and transportation brokerage services; Section 164, San Francisco Resident Placement and Training Program; Section 165, child care plans and child-care brokerage; as well as transit development impact fees under Article 38 of the *Administrative Code*.

In addition, construction may require use of one or more of the curb lanes adjacent to the project site for a pedestrian walkway, which would require a street space permit from the Bureau of Street Use and Mapping of the Department of Public Works and a special traffic permit from the Municipal Transportation Agency Sustainable Streets Division.

The project would also require building permits, which would require review and approval by the Planning Department and Department of Building Inspection (DBI).

#### **Approvals Summary**

#### **Planning Commission**

- Approval of the project under *Planning Code* Section 309, including exceptions with regard to building bulk (Section 270, including less than the required upper-tower volume reduction under Section 270(d)(3)(B)), separation of towers (Section 132.1(c)), ground-level winds (Section 148), and the prohibition on curb cuts along Transit Preferential Streets where an alternative frontage is available (Section 155(r)(4)).
- Allocation of office space under Planning Code Section 321 (Office Development Annual Limit).

#### Zoning Administrator

Variance from the maximum driveway width, per Planning Code Section 155(s)(5)(A), of 27 feet.

#### Department of Building Inspection

Demolition, site, and building permits.

#### Department of Public Works

• Street Space Permit from the Bureau of Street Use and Mapping for use of a public street space during project construction (for a pedestrian walkway)

#### Municipal Transportation Agency

 Special Traffic Permit from the Municipal Transportation Agency Sustainable Streets Division for use of a public street space during project construction (for a pedestrian walkway)

#### Bay Area Air Quality Management District

• Authority to Construct and Permit to Operate the proposed diesel-powered emergency generator.

Based on 0.00027 housing units per gross square foot of office development and a project of 340,000 square feet of gross floor area of office space, per *Planning Code* Section 313.5.

# **CHAPTER III**

# Compatibility with Existing Zoning and Plans

This chapter describes the project's inconsistencies, if any, with applicable plans and policies, including objectives and policies of the *San Francisco General Plan*. This chapter also discusses the project's compliance with *San Francisco Planning Code*, which implements the *General Plan*. Where inconsistencies are identified that could result in physical effects on the environment, the reader is directed to analysis of those effect in Chapter IV, Environmental Setting, Impacts, and Mitigation Measures.

#### San Francisco General Plan

The San Francisco General Plan contains 10 elements (Commerce and Industry, Recreation and Open Space, Residence, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that provide goals, policies, and objectives for the physical development of the City. In addition, the General Plan includes area plans that outline goals and objectives for specific geographic planning areas, such as the greater downtown, including the project site, policies for which are contained in the Downtown Plan, an area plan within the General Plan.

A conflict between a proposed project and a *General Plan* policy does not, in itself, indicate a significant effect on the environment within the context of the California Environmental Quality Act (CEQA). Any physical environmental impacts that could result from such conflicts are analyzed in this EIR. In general, potential conflicts with the *General Plan* are considered by the decisions-makers (normally the Planning Commission) independently of the environmental review process. Thus, in addition to considering inconsistencies that affect environmental issues, the Planning Commission considers other potential inconsistencies with the *General Plan*, independently of the environmental review process, as part of the decision to approve or disapprove a proposed project. Any potential conflict not identified in this environmental document would be considered in that context and would not alter the physical environmental effects of the proposed project that are analyzed in this EIR.

#### **Downtown Plan**

The project site is within the area covered by the Downtown Plan, an area plan within the General Plan. Centered on Market Street, the Plan covers an area roughly bounded by Van Ness Avenue to the west, the Embarcadero to the east, Folsom Street to the south, and the northern edge of the Financial District to the north. The Plan contains objectives and policies that address the following issues: provision of space for commerce, housing, and open space; preservation of the past; urban form; and movement to, from, and within the downtown area (transportation). The Downtown Plan was intended to maintain a compact downtown core and direct growth to areas with developable space and easy transit accessibility

so that downtown would "encompass a compact mix of activities, historical values, and distinctive architecture and urban forms that engender a special excitement reflective of a world city" (Downtown Plan, Introduction [p. II.1.1 of printed version]). The Downtown Plan limits growth in the traditional downtown, centered in the Financial District, through height limits and FARs (floor area ratios).

One of the fundamental concepts embodied within the Downtown Plan is to expand the City's downtown office core south from its traditional locus north of Market Street, in a way that "protects the fine scale and rich mix of uses in Chinatown, Jackson Square, Kearny Street, Union Square, Mid-Market, North of Market-Tenderloin, and the hotel-entertainment area near Mason Street." Thus, the Downtown Plan states, "Major office towers can be constructed on sites remaining in the financial core north and south of Market and in an expanded area south of Market centered on the Transbay Bus Terminal." The rezoning that accompanied adoption of the Downtown Plan established the City's greatest height limits (450 to 550 feet) in proximity to the Transbay Terminal, including the project site. The project site, which is at the southwest perimeter of this area of expansive height limits, has a permitted height of 550 feet.

Shortly after the Downtown Plan was adopted, San Francisco voters approved Proposition M, the Accountable Planning Initiative, that, among other things, established a limit of 950,000 square feet of office space that can be approved in each annual period ending in mid-October. Of that total, 75,000 square feet is reserved for smaller buildings of between 25,000 and 49,999 square feet. (See further discussion of Proposition M, including the eight priority policies established by the measure, on p. 35.)

The proposed project would be consistent with the Downtown Plan's stated goal of encouraging expansion of the downtown office core in the general vicinity of the Transbay Terminal while avoiding "undesirable consequences which cannot be mitigated" (Policy 1.1). The project would be generally consistent with other objectives and policies of the Downtown Plan, with the possible exception of the following:

- Policy 1.1: Encourage development which produces substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences which cannot be mitigated.
- Policy 2.1 Encourage prime downtown office activities to grow as long as undesirable consequences of such growth can be controlled.

The potential "undesirable consequences" of a project in the Downtown Plan area that are discussed in the text accompanying Policy 2.1 (and also referenced in Policy 1.1) include impacts related to out-of-scale office development on neighborhood character; loss of historical resources; increased shading of streets and publicly accessible open space; increased pedestrian-level winds; increased traffic and parking demand, pollutant emissions, and energy use; overburdened public transit; increased traffic noise; increased pressure on housing supply resulting from increased employment; and conversion of housing, retail, and service commercial space to office space. Physical effects related to certain of these issues, including shadow, wind, transportation, and air

Subsequent rezoning has expanded the area of height limits of 400 to 550 feet to locations along the north side of Folsom Street, where the Embarcadero Freeway once ran, and certain locations on Rincon Hill.

quality, are analyzed in the applicable sections of Chapter IV. Other issues, including land use, neighborhood character, aesthetics, historical resources, energy, noise, population and housing, were analyzed in the Initial Study and found to result in less-than-significant impacts. (Land use is discussed in the EIR for informational purposes.) This EIR identifies a significant, unavoidable impact only with respect to air quality (potential health risk due to exposure to diesel particulate matter and fine particulates [PM2.5] emitted during construction; see Section IV.C). This EIR also identifies significant impacts only in the areas of transportation (potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage and loading dock via the proposed driveway on Fremont Street, and with respect to oversize trucks using the loading dock; see Section IV.B), although mitigation is identified for these impacts. Other impacts were found to be less than significant, either in the EIR or, as noted above, in the Initial Study, including those related to aesthetics, cultural (archeological and historical) resources, shadow, wind, traffic, transit, and parking, operational air quality, energy, noise, and population and housing, in some cases with mitigation measures identified in this EIR. In terms of policy consistency, as noted in Chapter II, Project Description, the project would be inconsistent, in part, with the *Planning Code* bulk requirements that implement the Downtown Plan. As a result, the project would require exceptions to certain Planning Code provisions (see discussion under "Planning Code (Zoning)" below). These exceptions are permitted pursuant to Planning Code Section 309, and therefore do not result in a zoning inconsistency.

- Policy 10.5: Address the need for human comfort in the design of open spaces by minimizing wind and maximizing sunshine.
- Objective 14: Create and maintain a comfortable pedestrian environment.
- Policy 14.2: Promote building forms that will minimize the creation of surface winds near the base of buildings.

As noted, the proposed project also would require an exception from *Planning Code* Section 148 (ground-level winds), which is permitted under Section 309. Project wind impacts are analyzed in Section IV.E. It is noted that virtually every project involving a high-rise building that has been approved since adoption of the Downtown Plan has required, and has been granted, an exception to the *Planning Code* wind requirement that "When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements." This is because existing winds at many locations in Downtown San Francisco exceed both the comfort criterion of 7 miles per hour in public seating areas and the comfort criterion of 11 miles per hour in areas of substantial pedestrian use (generally, sidewalks), and it is generally not feasible to design a new building that would reduce existing wind speeds such that the these criteria would be met, or, in many instances, to avoid creating a certain number of new exceedances.

- Policy 13.2 Foster sculpturing of building form to create less overpowering buildings and more interesting building tops, particularly the tops of towers.
- Policy 13.4 Maintain separation between buildings to preserve light and air and prevent excessive bulk
- As also noted, the proposed project would require an exception from the requirement of *Planning Code* Section 132.1(c) with respect to separation of towers, and from the requirement of Section 270(d) with respect to the bulk of the upper tower. Although the project would require the foregoing exceptions, the physical effects of the setback and bulk exceptions that would be required for the project are analyzed in relevant sections of this EIR, including Section IV.E, Wind, and Section IV.F, Shadow, as well as Section E.2, Aesthetics, of the Initial Study, EIR Appendix A. No significant effects were identified with respect to wind, shadow, aesthetics, or other topics potentially affected by the proposed setback in the EIR.

### Other Plans

Environmental plans and policies are those, like the *Bay Area 2005 Ozone Strategy*, which directly address environmental issues and/or contain targets or standards that must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy.

### **Transbay Redevelopment Plan**

The Transbay Redevelopment Area does not include the project site. The redevelopment area is roughly bounded by Mission Street, Second Street, Main Street, and Folsom Street. The main objectives of the Transbay Redevelopment Plan, adopted in June of 2005, are to replace the existing underutilized and outmoded Transbay Terminal and revitalize the vacant and underutilized properties which characterize the remainder of the Redevelopment Area. The Transbay Redevelopment Plan contains the following goals: Create a pedestrian-oriented urban environment that encourages walking as a primary transportation mode within the project area; Encourage the use of alternative modes of transportation by future area residents, workers, and visitors and support the new Transbay Terminal as a major hub while still providing local vehicular access; Create a livable urban community with prime access to downtown and the waterfront, and well-designed streets, open space and retail areas; Establish the area as both a gateway to the central city and a unique transit-oriented neighborhood in San Francisco; Develop a new downtown neighborhood to help address the City's and the region's housing crisis, support regional transit use, and provide financial support to the future Transbay Terminal, including access ramps and a temporary terminal facility, and Caltrain Downtown Extension; Enhance linkage between the new Transbay Terminal and the Financial District through visitor accommodations and commercial development that supports the new terminal; and Create a state of the art multi-modal facility that is an integral part of the surrounding commercial and residential neighborhood. The proposed project is not within the Transbay Redevelopment Plan Area, and would not substantially conflict with any of the goals of the Transbay Redevelopment Plan.

# **Proposed Transit Center District Plan**

A comprehensive plan is being prepared by the Planning Department for the Transit Center District, an area around the Transbay Terminal roughly bounded by Market Street, the Embarcadero, Folsom Street, and Third Street. The proposed Transit Center District Plan, released in draft form in November 2009, <sup>13</sup> sets forth a number of goals that generally include increasing the amount of allowable development in the transit-rich downtown core, while at the same time improving public amenities, modifying the system of streets and circulation to meet the needs and goals of a dense transit-oriented district, providing additional open space, implementing policies to preserve existing historic structures, and enhancing sustainability. The proposed Plan would result in new planning policies and controls for land use; urban form, including building height and design; street network modifications/public realm

<sup>&</sup>lt;sup>13</sup> The *Transit Center District Plan — Draft for Public Review* is available on the internet at: <a href="http://www.sf-planning.org/ftp/CDG/CDG">http://www.sf-planning.org/ftp/CDG/CDG</a> transit center.htm.

improvements; historic preservation; and district sustainability, including the potential creation of a district-wide combined heat and power (cogeneration) system, the enhancement of green building standards in the district, and reductions in potable water use and stormwater runoff. The proposed Plan would allow for height limit increases in subareas comprised of multiple parcels or blocks within the Plan Area. It would also propose one or more programs to support the Transit Center Program and other necessary public infrastructure and amenities in the area through the implementation of one or more new fees or assessments that would be applied to new development. The proposed Plan would result in a comprehensive plan and implementing mechanisms, including *General Plan, Planning Code* and Zoning Map amendments, as necessary.

The proposed 350 Mission Street project is expected to be considered by the Planning Commission prior to adoption of the Transit Center District Plan. The project would nonetheless be consistent with the proposed Transit Center District Plan, both in terms of land use and building height, 14 as well as with the proposed Plan's emphasis on office use; direction to provide parking and loading access from streets where curb cuts are not restricted; increased bicycle parking requirement; and policy language calling for interior open space to have a "distinct street presence," have abutting retail space, and be accessible directly from the sidewalk through such means as sliding wall panels. The 350 Mission Street project would also generally be consistent with the proposed Plan's emphasis on energy efficiency and sustainability. The proposed project would not be consistent with the proposed Plan's policy language concerning the establishment of a distinct building base (the proposed Plan calls for a minimum 10 foot setback above the base, while the project would have no setbacks). The proposed project would appear to be consistent with the Plan's direction that building lobbies be limited in width and that most of a building's frontage "be occupied with public-oriented uses, including commercial uses and public open space." Although the proposed project would have street-level openings about 90 feet long along Mission Street and about 70 feet long along Fremont Street, these openings would front onto publicly accessible interior open space.

In general, therefore, the proposed 350 Mission Street project would not substantially conflict with the draft Transit Center District Plan, as proposed in November 2009.

# The Sustainability Plan

In 1993, the San Francisco Board of Supervisors established the Commission on San Francisco's Environment, charged with, among other things, drafting and implementing a plan for San Francisco's long-term environmental sustainability. The notion of sustainability is based on the United Nations definition that "a sustainable society meets the needs of the present without sacrificing the ability of future generations and non-human forms of life to meet their own needs." The Sustainability Plan for the City of San Francisco was a result of community collaboration with the intent of establishing sustainable development as a fundamental goal of municipal public policy.

 $<sup>^{14}</sup>$  The proposed plan calls for a 700-foot height limit at the project site.

The *Sustainability Plan* is divided into 15 topic areas, 10 that address specific environmental issues (air quality; biodiversity; energy, climate change and ozone depletion; food and agriculture; hazardous materials; human health; parks, open spaces, and streetscapes; solid waste; transportation; and water and wastewater), and five that are broader in scope and cover many issues (economy and economic development, environmental justice, municipal expenditures, public information and education, and risk management). Additionally, the *Sustainability Plan* contains indicators designed to create a base of objective information on local conditions and to illustrate trends toward or away from sustainability. Although the *Sustainability Plan* became official City policy in July 1997, the Board of Supervisors has not committed the City to perform all of the actions addressed in the Plan. The *Sustainability Plan* serves as a blueprint, with many of its individual proposals requiring further development and public comment.

#### The Climate Action Plan

In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) committing the City and County of San Francisco to a greenhouse gas (GHG) emissions reductions goal of 20 percent below 1990 levels by the year 2012. The resolution also directs the San Francisco Department of the Environment, the San Francisco Public Utilities Commission, and other appropriate City agencies to complete and coordinate the analysis and planning of a local action plan targeting GHG emission reduction activities. In September 2004, the Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions. The Climate Action Plan examines the causes of global climate change and human activities that contribute to global warming and provides projections of climate change impacts on California and San Francisco from recent scientific reports; presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets; describes recommended emissions reduction actions in the key target sectors - transportation, energy efficiency, renewable energy, and solid waste management - to meet stated goals by 2012; and presents next steps required over the near term to implement the Plan. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions are now in progress.

The *Climate Action Plan* cites an array of potential environmental impacts to San Francisco from climate change, including rising sea levels which could threaten coastal wetlands, infrastructure, and property; increased storm activity that could increase beach erosion and cliff undercutting; warmer temperatures that could result in more frequent El Niño storms causing more rain than snow in the Sierra, reducing snow pack that is an important source of the region's water supply; decreased summer runoff and warming ocean temperatures that could affect salinity, water circulation, and nutrients in the Bay, potentially altering Bay ecosystems; as well as other possible effects to food supply and the viability of the state's agricultural system; possible public health effects related to degraded air quality and changes in disease vectors; as well as other social and economic impacts.

The Plan presents estimates of San Francisco's baseline GHG emissions inventory and reduction targets. It states that burning fossil fuels in vehicles and for energy use in buildings and facilities are the major

contributors to San Francisco's GHG emissions. The *Climate Action Plan* seeks to reduce annual carbon dioxide emissions, by 2012, by 20 percent from 1990 emissions levels. Reduction strategies include targeting emission reductions from burning fossil fuels in cars, power plants and commercial buildings; developing renewable energy technologies like solar, wind, fuel cells and tidal power; and expanding residential and commercial recycling programs. According to the Plan, achieving these goals will require the cooperation of a number of different city agencies. An analysis of the proposed project's effects on global warming and GHGs is presented in Section IV.D, Greenhouse Gas Emissions.

### San Francisco Bicycle Plan

In August 2009, the Board of Supervisors approved the San Francisco Bicycle Plan. The Bicycle Plan includes a citywide bicycle transportation plan (comprised of a "Policy Framework" and a "Network Improvement" document) and implementation of specific bicycle improvements identified within the Plan. The draft Bicycle Plan includes objectives and identifies policy changes that would enhance the City's bike-ability. It also describes the existing bicycle route network (a series of interconnected streets in which bicycling is encouraged), and identifies gaps within the citywide bicycle route network that require improvement. The Bicycle Plan updates the 1997 San Francisco Bicycle Plan. The Final Environmental Impact Report for the Bicycle Plan assessed a total of 56 short-term and long-term bicycle improvement projects. In the vicinity of the project site, the adopted Bicycle Plan includes the following projects: a shared bicycle-vehicle lane on northbound Fremont Street between Harrison and Howard Streets and an exclusive bicycle lane (replacing a vehicle travel lane) on southbound Fremont Street between Folsom and Howard Streets; a bicycle lane in a widened parking lane on westbound Howard Street between the Embarcadero and Fremont Street; and a new bicycle lane on southbound Beale Street between Fremont and Bryant Streets. In addition, the Bicycle Plan EIR evaluated new bicycle lanes on Second Street, involving removal of one traffic lane in each direction and a prohibition on left turns on Second Street between Market and King Streets. However, this project was not included in the adopted Bicycle Plan, and is undergoing further public review and design refinements.

#### **Better Streets Plan**

The City of San Francisco is currently developing a Better Streets Plan, with the aim of creating a unified set of standards, guidelines, and implementation strategies to govern how the City designs, builds, and maintains public streets and rights-of-way.

The main focus of the Better Streets Plan is upon the pedestrian environment and on the most appropriate design for allowing streets to be used as public space. The Better Streets Plan is proposed to consist of two primary elements, the Streetscape Master Plan (SMP) and the Pedestrian Transportation Master Plan (PMP), which may ultimately be combined into a single final plan.

The SMP will include design standards which can be used to guide citywide streetscape design, improving overall quality, aesthetic character, and ecological function of San Francisco's streets while maintaining safe and efficient use of transportation.

### **Transit First Policy**

The City of San Francisco's Transit First policy, adopted by the Board of Supervisors in 1973, was developed in response to the damaging impacts over previous decades of freeways on the City's urban character. The policy is aimed at restoring balance to a transportation system long dominated by the automobile, and improving overall mobility for residents and visitors whose reliance chiefly on the automobile would result in severe transportation deficiencies. It encourages multi-modalism, the use of transit and other alternatives to the single-occupant vehicle as modes of transportation, and gives priority to the maintenance and expansion of the local transit system and the improvement of regional transit coordination.

The following ten principles constitute the City's Transit First policy:

- 1. To ensure quality of life and economic health in San Francisco, the primary objective of the transportation system must be the safe and efficient movement of people and goods.
- Public transit, including taxis and vanpools, is an economically and environmentally sound
  alternative to transportation by individual automobiles. Within San Francisco, travel by public
  transit, by bicycle and on foot must be an attractive alternative to travel by private automobile.
- 3. Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights of way by pedestrians, bicyclists, and public transit, and shall strive to reduce and improve public health and safety.
- 4. Transit policy improvements, such as designated transit lanes and streets and improved signalization, shall be made to expedite the movement of public transit vehicles (including taxis and vanpools) and to improve public safety.
- 5. Pedestrian areas shall be enhanced wherever possible to improve the safety and comfort of pedestrians and to encourage travel by foot.
- 6. Bicycling shall be promoted by encouraging safe streets for riding, convenient access to transit, bicycle lanes, and secure bicycle parking.
- 7. Parking policies for areas well served by public transit shall be designed to encourage travel by public transit and alternative transportation.
- 8. New transportation investment should be allocated to meet the demand for public transit generated by new public and private commercial and residential developments.
- 9. The ability of the City and County of San Francisco to reduce traffic congestion depends on the adequacy of regional public transportation. The City and County shall promote the use of regional mass transit and the continued development of an integrated, reliable, regional public transportation system.
- 10. The City and County shall encourage innovative solutions to meet public transportation needs wherever possible and where the provision of such service will not adversely affect the service provided by the Municipal Railway. (Added November 1999.)

The proposed project would result in infill development in an existing urban area, encouraging use of transit and alternative transportation modes, and would also increase proximity of jobs to housing within the City. These factors would be expected to help minimize single-person auto travel in the future, which would be consistent with the intent of the Transit First Policy.

### **Transit Effectiveness Project**

The Transit Effectiveness Project (TEP) was undertaken by the Municipal Transportation Authority (MTA) and the San Francisco Controller's Office to review, evaluate, and make recommendations on the Municipal Railway system. The TEP resulted in recommendations to improve service, attract more riders, and increase efficiency. Participants included a Citizen Advisory Committee (CAC); a Policy Advisory Group that includes representatives from the Mayor's office, Board of Supervisors, transit unions, the CAC, MTA Citizens Advisory Council, San Francisco County Transportation Authority, and the Metropolitan Transportation Commission; and a Technical/Regional Advisory Committee that includes representatives from various City departments and local and regional transit agencies who will provide technical review and comment. In October 2008, the MTA Board of Directors voted unanimously to endorse the TEP recommendations that focus on service factors aimed at increasing customer convenience, including improved reliability, reduced travel time, more frequent service and updated Muni bus routes and rail lines that track with current travel patterns. The full set of recommendations is subject to environmental review prior to implementation. (Because the TEP affects City provision of transportation services, no determination is made relative to project consistency.)

# Planning Code (Zoning)

The San Francisco Planning Code, which incorporates by reference the City's Zoning Maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless either the proposed project conforms to the Code, or an exception is granted pursuant to the provisions of the Code. The proposed project is located in a C-3-O District wherein office use is permitted. The C-3-O district is described in Planning Code Section 210.3 as consisting primarily of high-quality office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales and personal services uses. Therefore, the project's proposed office units would be a principally permitted use. The C-3-O District permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted with transferrable development rights. The proposed project would have a FAR of 18:1.

The project site is within the 550-S Height and Bulk district (550-foot height limit; bulk limits for base, lower, and upper towers per Section 270(d)). The proposed project would conform to the *Planning Code* height limit for the site. Because the project would exceed bulk limits for the upper tower (above a height of 220 feet), the project sponsor is seeking exceptions to the bulk requirements (Section 270), under *Planning Code* Section 309, because the upper tower portion of the building would exceed the maximum permitted floor area and diagonal plan dimension. The sponsor is also seeking an exception from the requirement of *Planning Code* Section 132.1(c) with regard to separation of towers, because the proposed project would not meet the minimum separation requirements from buildings to the north and east. The *Code* requirement, based on the building's proposed 375-foot height, is a minimum tower setback of 21 feet from the centerline of adjacent street(s) and from interior property line(s). The project would have a setback of approximately 14 feet from the eastern interior property line (adjacent to the building at 50 Beale Street), but this setback would be penetrated by a 40-foot-wide mechanical element extending approximately 7.5 feet into this space. The project would have a setback of approximately 6.5 feet from

the northern interior property line (adjacent to the building at 45 Fremont Street). Therefore, the proposed project would require an exception from the requirement for separation of towers of Section 132.1(c). The project would comply with the setback requirement from abutting streets.<sup>15</sup>

The proposed project would provide on-site publicly accessible open space in the form of an indoor plaza within the ground floor of the building. *Planning Code* Sec. 138 requires open space be provided at the rate of one square foot per 50 square feet of gross floor area in the C-3 Districts. The proposed project would include approximately 340,000 gross square feet of office space and would thus be required to provide a total of about 6,800 square feet of open space. With 6,960 square feet of common usable open space in a publicly-accessible interior area, the project would exceed the *Planning Code*'s open space requirement. The *Planning Code* considers such enclosed space that is available to the public to be "open space" for the purposes of this requirement.

As noted, the project would not meet the required building bulk limits prescribed by *Planning Code* Section 270, and the project sponsor has applied for an exception to the bulk limits as provided in Section 309 by meeting specifications of *Planning Code* Section 272. The project also would require an exception from *Planning Code* provisions for Downtown projects in the area of ground-level wind current requirements (Section 148), because the project would not reduce existing exceedances of the pedestrian wind speed criterion and would result in a net increase of one exceedance of the pedestrian comfort criterion.

Planning Code Section 151.1 permits off-street parking up to a maximum of 7 percent of building gross floor area for office uses in the C-3 Districts. The proposed floor area devoted to off-street parking would be 23,540 square feet, which is less than the permitted maximum amount, thereby satisfying the requirements of Section 151.1. Planning Code Section 152.1 requires that the proposed project provide three off-street loading spaces. <sup>16</sup> However, Section 153(a)(6) allows the substitution in C-3 Districts of two service vehicle spaces for each required off-street freight loading space, provided that a minimum of 50 percent of the required number of spaces are provided for freight loading. The project proposes two full-size off-street loading spaces, along with two service vehicle spaces in the basement; together, these spaces would meet the Planning Code off-street loading requirement. However, as noted the proposed project would require a variance to provide a 33-foot-wide driveway, where the maximum permitted width is 27 feet. Additionally, the project would require an exception from the requirements of *Planning* Code Section 155(r)(4), which prohibits curb cuts along Transit Preferential Streets where an alternative frontage is available, for the proposed garage/loading dock curb cut on Fremont Street. As both Fremont and Mission Streets are identified as Transit Preferential Streets in the General Plan Transportation Element, no alternative frontage is available on the project site for a curb cut. Mission and Fremont Streets are both Primary Transit Streets, although the designation for Mission Street (Transit-Oriented Street) is

The setbacks from Fremont and Mission Streets, each of which is 82 feet, 6 inches in width, would be more than 41 feet.

Calculation: 0.1 space per 10,000 sq. ft. of gross floor area (to closest whole number per Section 153). Thus,  $340,000 \div 10,000 \times 0.1 = 3.4$ , rounded to three spaces.

one level higher than that for Fremont Street (Transit-Important Street). Accordingly, Fremont Street, as the lesser of the two in transit importance, would be favored over Mission Street as the site for a curb cut.

The project site is not within a Downtown Conservation District or Redevelopment Area.

### **Exceptions to Planning Code Bulk, Wind, and Shadow Requirements**

A comment was received on the Notice of Preparation for the proposed project regarding the cumulative effects of exceptions granted, to various projects over the years, from the Planning Code requirements concerning wind, shadow, and building bulk, in connection with review and approval of projects under Planning Code Section 309, Permit Review in C-3 Districts. Review of Planning Department records and Planning Commission minutes in 2010 revealed that there have been more than 30 cases involving exceptions from Planning Code requirements for ground level winds (Section 148) and building bulk (Section 270) that have been granted since the Downtown Plan and accompanying zoning regulations were approved, including a recently approved office tower at 222 Second Street, at Howard Street. About 27 of these buildings have been constructed, including essentially all major downtown buildings built since the adoption of the Downtown Plan. Another project granted an exception is under construction. Planning Code Section 146(c), which states that new buildings and building additions shall be shaped "so as to reduce substantial shadow impacts on public sidewalks in the C-3 Districts" [other than on specified streets that are governed by another Code section], if this can be accomplished "without creating an unattractive design and without unduly restricting the development potential of the site in question." Determinations are made with respect to compliance with this requirement as part of the Section 309 downtown project review process. Planning Department records reveal at least two projects that have been granted exceptions with respect to the Code's wind and bulk provisions have also been specifically determined to be in compliance with the Section 146(c) requirement, including the newly built Millennium residential tower, across Mission Street from the project site, and the office tower at 555 Mission Street, one and one half blocks to the west.

With regard to wind (Section 148), in particular, the vast majority of projects involving high-rise buildings that have been approved since adoption of the Downtown Plan have required, and have been granted, an exception to the *Planning Code* wind requirement that, "When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements." This is because existing winds at many locations in Downtown San Francisco exceed both the comfort criterion of 7 miles per hour (mph) in public seating areas and the comfort criterion of 11 mph in areas of substantial pedestrian use (generally, sidewalks), and it is generally not feasible to design a new building that would reduce existing wind speeds such that the these criteria would be met, or, in many instances, to avoid creating a certain number of new exceedances.

In the case of the project, for example, as discussed in detail in Section IV.E, Wind, wind-tunnel testing revealed that the project would have limited effect on pedestrian-level winds, would eliminate one pedestrian wind speed exceedance and create two new exceedances, and would not create any new exceedances of the wind hazard criterion. However, as is nearly universally true, where existing winds

exceed the pedestrian comfort criterion speed of 11 mph; or the seating comfort criterion speed of 7 mph, where applicable), development of the project would not eliminate all existing wind speed exceedances of the pedestrian (or seating) comfort level criteria. For this reason, in most cases, it cannot be expected that a project can "be designed to reduce the ambient wind speeds to meet the requirements" of *Planning Code* Section 148, and this is why exceptions to these requirements are commonly granted. While designs of individual buildings that have been granted exceptions to Section 148 criteria may have resulted in localized changes in wind speeds, the results of wind analyses over the years do not indicate that the overall wind environment in the Downtown has degraded as a result of cumulative development since the adoption of the Downtown Plan.

In terms of cumulative effects related to compliance with Section 146, the effect of each potential project's shadow is evaluated by Planning Department staff, with the conclusions presented in the proposed approval motion that was presented to the Planning Commission and then reviewed and, for those projects approved by the Commission, consented to by the Commission as part of the findings required under Planning Code Section 309, Permit Review in C-3 Districts. In general, findings have indicated that, with respect to determinations under Section 146(c), as well as exceptions to Section 146(a), which governs specific streets (not including Fremont or Mission Street), approvals were granted when a project did not result in substantial new shadow on sidewalks and streets. That is, shadow from any individual project, including the proposed 350 Mission Street project, would (or does, in the case of existing buildings) cover a relatively small area of sidewalk and/or street, for a relatively short duration. The Downtown Plan EIR of 1984 acknowledged that assumed development could result in several hours of sunlight being eliminated in the winter at a particular sidewalk location, but found that several hours of existing sunlight would often remain during spring, fall, and summer. Moreover, much of the activity on Downtown sidewalks consists of routine travel from one place to another that is unlikely to be adversely affected by incremental new shadow, as opposed to recreational activity. Finally, to the extent that a project that exceeds the *Planning Code* bulk limits is responsible for additional shadow, compared to a compliant building, the bulk exceptions are likely to be made for the building's upper tower, where bulk requirements are more stringent. This means that potential shadow impacts of such a bulk exception are likely to be more distant from the building's location (because shadow from a taller building extends much farther than shadow from a short building). As the distance from a building increases, so too does the chance that this building's shadow on a distant site is intercepted by shadow from a building closer to the distant site, even if the closer building is shorter than the building in question. Thus, the impact would not appear to "substantially affect the usability of other existing publicly accessible open space or outdoor recreation facilities or other public areas" (the criterion for an effect under CEQA), and the cumulative exceptions granted do not appear to warrant a conclusion that such exceptions could combine to result in a cumulative significant impact with respect to shadow on Downtown sidewalks.

Beyond effects on ground-level winds and shadow, building bulk affects visual impacts as well. However, a comparison of views of the Downtown from Potrero Hill (one showing 2008 conditions, and another showing long-term projected development as assumed in the Downtown Plan EIR) shows that, in general, development in the Downtown has resulted in a configuration of the Downtown skyline that is comparable to that forecast in the Downtown Plan EIR, despite the fact that, as noted above, more than two dozen buildings have been built without full compliance with the Downtown Plan bulk controls. Full

compliance with the bulk controls would have resulted in a relatively minor change, compared to now-existing conditions, in the sculpting of the top of newer buildings, particularly with regard to the rooftop cupola-like elements. However, it does not appear that development that has proceeded since adoption of the Downtown Plan has resulted in substantially different building bulks than was anticipated in the Downtown Plan EIR.

Regarding the granting of exceptions to *Planning Code* requirements under Section 309 generally, this is a policy decision that is made by the Planning Commission on a case-by-case basis. To the extent that the granting of such exceptions would result in physical impacts, those impacts are analyzed in this EIR. The fact that a project would require one or more exceptions to *Planning Code* requirements does not, in itself, indicate that the project would have a significant physical effect on the environment.

### **Accountable Planning Initiative**

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the *Planning Code* to establish eight Priority Policies. These policies are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (discussed in question 1c of the Initial Study [Appendix A]); (3) preservation and enhancement of affordable housing (Question 1b, Population and Housing, in the Initial Study, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Section IV.B, Transportation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; (6) maximization of earthquake preparedness (Questions 7a -7d, Geology and Soils, in the Initial Study); (7) landmark and historic building preservation (question 4a, Cultural Resources, in the Initial Study); and (8) protection of open space (Questions 3a and c, Recreation, in the Initial Study, as well as Section IV.E, Wind, and Section IV.F, Shadow). The Priority Policies, which provide general policies and objectives to guide certain land use decisions, contain some policies that relate to physical environmental issues. The proposed project would not obviously or substantially conflict with any such policy. Prior to issuing a permit for any project that requires an Initial Study under CEQA, and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. In evaluating General Plan consistency of the project and reviewing the building permit application for the proposed project, the Planning Commission and/or Planning Department would make the necessary findings of consistency with the Priority Policies.

## **Summary**

The proposed project would develop a high-rise office building in an area of the downtown which the *General Plan* and *Planning Code* expressly identify as an appropriate location for such development. The project would comply with most *Planning Code* requirements, with certain exceptions regarding bulk, separation of towers, ground-level winds, and a curb cut being sought as permitted pursuant to *Planning Code* Section 309. The proposed project would be generally consistent with *General Plan* objectives and policies applicable to the project and its proposed location. The staff report for the Planning Commission

will analyze the project's consistency with *General Plan* policies and zoning, and will discuss in detail any exceptions requested or modifications required.

# **CHAPTER IV**

# Environmental Setting, Impacts, and Mitigation Measures

### A. Land Use

The Initial Study (see Appendix A) determined that effects related to land use would be less than significant. This section, therefore, presents a discussion of existing land uses at the project site and in the vicinity for informational purposes, to orient the reader. The project would not result in any significant impacts related to land use.

The proposed project is within San Francisco's Financial District, which functions as the densely developed center of commerce and employment for the city as well as for the nine county Bay Area. Development in the vicinity consists primarily of office space above ground-floor retail stores. The block on which the project site is located contains three high-rise office buildings—ranging in height from about 330 feet to 470 feet—in addition to the four-story office and retail building on the project site. There are also office towers across Fremont Street to the west. To the southwest, the Transbay Transit Terminal is located diagonally across the intersection of Fremont and Mission Streets from the project site. Immediately south of the site, across Mission Street, is the newly constructed Millennium Tower, the City's tallest residential building, at 60 stories and nearly 650 feet in height. It has ground-floor restaurant space on Mission Street.

Market Street, San Francisco's major commercial thoroughfare and transit artery, is one block north of the project site. The Embarcadero is five blocks east of the site, and the elevated Interstate 80 freeway that leads to the Bay Bridge is just over three blocks south.<sup>17</sup> The area to the northwest, north, and east of the project site consists primarily of additional high-rise office structures with associated ground-floor retail. West and southwest of the project site, beyond the Transbay Terminal, land uses are generally lower density, but consist primarily of office and retail uses similar to those elsewhere in the neighborhood. Additional residential uses are found two blocks southeast at Rincon Center, at the Infinity towers five blocks southeast, and to the west, on Market, New Montgomery and Third Streets. Nearby hotels include the Hyatt Regency on Market Street and smaller hotels on Steuart Street, along with the Palace Hotel on New Montgomery Street, the Argent Hotel on Third Street, and the Four Seasons Hotel on Market Street

In the South of Market Area in the project site vicinity, blocks northeast of First Street are primarily 550 feet long (northwest to southeast) and 275 feet wide (northeast to southwest). Blocks southwest of First Street are primarily 550 feet long (northwest to southwest) and 825 feet wide (northeast to southwest). Some blocks southwest of First Street are further subdivided by narrow streets, alleys, or other main thoroughfares, such as New Montgomery Street. Main thoroughfares, including those bordering the project site, are almost exclusively 82.5 feet wide.

near Third Street. Golden Gate University is located on Mission Street between First and Second Streets, a little more than a block west of the site. Additionally, the UC Berkeley Extension San Francisco campus is located in the office tower at 425 Market Street, less than one block from the project site. Heald College, a private two-year school offering career-oriented associates' degrees, currently occupies space in the building on the project site. The Yerba Buena Center/Moscone Convention Center area is about three blocks east of the project site.

The nearest open spaces to the project site include Justin Herman Plaza (on the Embarcadero to the north and south of Market Streets), Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets), Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along the Embarcadero). There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west.

As concluded in the Initial Study (Appendix A), uses in the proposed project would be consistent with those on the project block and in the vicinity; the proposed project would not physically divide an established community and would generally be consistent with the land use and density controls and with the height limit in the *San Francisco Planning Code*; and the proposed project would not result in a substantial change in the character of the vicinity. Therefore, impacts related to land use were determined to be less than significant.

# Mitigation and Improvement Measures

Because no significant impacts are identified in the above analysis, no mitigation is required.

# **B.** Transportation

A transportation study was prepared for the EIR, and information from that document is used and summarized in this section.<sup>18</sup>

## Setting

### **Street System**

Interstate Highway 80 (I-80) and U.S. Highway 101 (U.S. 101) provide the primary regional access to the project site, linking the area to the East Bay (I-80, via the Bay Bridge) and to the North Bay (U.S. 101, via the Golden Gate Bridge) and the Peninsula and South Bay (U.S. 101). U.S. 101 merges with I-80 at an elevated structure in the vicinity of Division and Tenth Streets. Access to and from I-80 is provided via on- and off-ramps at Fremont, Harrison/Essex, First/Harrison, Fifth/Bryant, and Fourth/Harrison Streets. Ramps to and from the U.S. 101 freeway are at Fourth/Harrison and Fourth/Bryant Streets. I-280 provides alternative access to the Peninsula/South Bay, with ramps at King Street (near Fifth Street) and Sixth Street (at Brannan Street).

Within the project vicinity, Market, Mission, Howard, Folsom, First, Fremont, Beale, Main, Steuart, Sansome, Battery, and Pine Streets and the Embarcadero are designated in the Downtown Plan as Transit Preferential Streets. On these streets, priority is given to transit vehicles over autos during commute and business hours on weekdays, usually along curbside lanes. Howard Street and the Embarcadero, along with First and Fremont Streets south of Howard Street, are designated in the Downtown Plan as Primary Vehicular Streets. Howard Street (east of Fremont Street) and Folsom, Beale, Main, and Spear Streets are Pedestrian Oriented/Vehicular Streets. The Embarcadero (Route 5), Market Street (Route 50), Howard and Folsom Streets (Route 30), and Second Street (Route 11) are designated bicycle routes. The Embarcadero has Class II bicycle lanes in each direction, while Market Street has "sharrows" (arrows indicating shared bicycle/auto use) in both directions. Howard and Folsom Streets each has a Class II bicycle lane, and Second Street (Route 11) is a Class III route, meaning bicyclists and motorists share the roadway width. The Downtown Plan identifies Market, Mission, Howard, Folsom, Beale, Main, Kearny, and Montgomery Streets and the Embarcadero as Commuter Bike Streets. All major intersections in the vicinity of the project site are traffic signal controlled.

Market and Mission Streets are two-way streets with two traffic lanes in each direction; one lane in each direction on Mission Street is designated a transit-only lane. Howard Street is a one-way street west of Fremont Street with four travel lanes in the westbound direction, and a two-way street with two travel lanes in each direction between The Embarcadero and Fremont Street. Folsom Street is a one-way street west of Main Street with four travel lanes in the eastbound direction, and a two-way street with three eastbound lanes and one westbound lane between The Embarcadero and Main Street. Fremont Street is

AECOM, 350 Mission Street Office Building Transportation Report, August 18, 2010. This report is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Project File No. 2006.1524E.

one way northbound north of Fremont Street, with three lanes north of Howard Street, including a transit-only lane on the project block, between Mission and Market Streets; it receives traffic from two off-ramps from the westbound Interstate 80 freeway (Bay Bridge). On the opposite (north) side of Market Street, Fremont Street transitions to Front Street, which is also one-way northbound. Beale Street (which transitions from one-way southbound Davis Street north of Market) is a one-way southbound street north of Folsom Street, with three lanes in the project vicinity. First Street is one-way southbound, with four lanes, including a transit-only lane, in the project vicinity. It transitions from Battery and Bush Streets north of Market Street and is a major access point to the eastbound Bay Bridge. (Freeway access to and from the west/south is farther west, at Fourth Street.) Parking is generally permitted on both sides of area streets except Market Street, but is restricted in the p.m. peak period.

#### **Transit**

The project site is located in one of the best-served transit environments in San Francisco. It across the street from the Transbay Terminal, <sup>19</sup> less than two blocks from Muni Metro and BART service beneath Market Street, at the Embarcadero Station, and within walking distance (considered one-quarter of a mile) of stops for more than 15 Muni local and express bus lines and the F-line historic streetcar. AC Transit, SamTrans buses, and other regional carriers serve the Transbay Terminal, and Golden Gate Transit buses operate on Fremont, Beale, and Mission Streets. Caltrain is available at the Fourth/Townsend depot via a connecting Muni line. **Figure 8** depicts the transit network in the project area.

Most of Golden Gate Transit's peak-hour bus routes through the Financial District stop along the east side of Fremont Street adjacent to, and near, the project site. These buses travel northbound along Fremont Street to Front Street, then turn left on Pine Street and right onto Sansome Street before continuing northwest towards the Golden Gate Bridge. In particular, the stop for Golden Gate Transit lines 26, 27, and 44 is located on Fremont Street approximately 30 feet south of the project site's northern property line. Three more bus stops (for Golden Gate Transit lines 18, 24, and 38) are farther north on Fremont Street, and six other lines board just south of the project site, on Fremont Street across Mission Street.

Observations indicate that Golden Gate Transit buses occasionally double-park or do not pull in completely parallel to the curb when boarding passengers, temporarily affecting roadway capacity along Fremont Street. Buses typically spend three to five minutes stopped while loading passengers. Approximately 15 to 30 passengers board each bus at this stop during the p.m. peak period. Due to the frequency of the bus service and the ridership levels, these passengers typically queue along portions of the street frontage adjacent to the project site as they wait.

The site is less than two blocks from the Temporary Transbay Terminal at Howard and Beale Streets that will operate during demolition of the existing terminal and construction of the new Transit Center. The temporary terminal opened in August 2010, following closure of the old Transbay Terminal.



NOTE: Map represents transit network as of December 2009

Case No. 2006.1524E: 350 Mission Street . 207037

Figure 8
Project Area Transit Network

#### **Pedestrians**

All major streets in the vicinity have sidewalks and all major intersections have signalized crossings with marked crosswalks. Sidewalks adjacent to the project site are approximately 12 to 14 feet in width, or approximately 8 to 10 feet in effective width when considering obstructions such as street trees, lamp posts, newspaper racks, and other objects. Because of the project site's Downtown location near several key transit facilities, there is generally a high level of pedestrian activity throughout the day, with peaks occurring in the morning as employees head to office buildings, during the midday lunch period, and in the evening as employees head home. There is generally a moderate potential for pedestrian-vehicle conflicts, primarily on left- and right-turning movements, such as the northbound right turn from Fremont Street to Mission Street or the southbound right turn from First Street to Mission Street. Effects of these pedestrian-vehicle conflicts are more apparent in the operations of the affected vehicular movements (which may see reduced capacity) than in safety hazards to pedestrians. Sidewalks on Mission and Fremont Streets operate at a level of service (LOS) B in both the midday and p.m. peak hour, on a A-to-F scale, while the street corners at the First/Mission Streets intersection are at LOS A and the crosswalks operate at a range of between LOS A and LOS D, all of which are considered acceptable (i.e., better than LOS E).<sup>20</sup>

### **Bicycles**

In addition to the bicycle routes identified under Street System, above, the San Francisco Bicycle Plan, approved in 2009, recommends a number of near-term improvements, including the creation of bicycle lanes on Beale Street between Bryant Street and Folsom Street, on Fremont Street between Howard Street and Harrison Street, and on Howard Street between the Embarcadero to Fremont Street. Improvements on Second Street were not included in the approved plan, but the Municipal Transportation Agency plans a community-based design charrette for the Second Street bicycle lane design in 2010, followed by additional staff review and the release of a new preferred plan in 2011 – 2012.<sup>21</sup>

Field observations indicate that there is some potential for conflicts between vehicles and bicycles along Market Street due to moderate bicycle traffic and right-turning vehicles. Due to heavy pedestrian volumes along Market Street, there is also the potential for conflicts between bicycles and pedestrians at crosswalks. The 2009 San Francisco Bicycle Plan also recommends intersection improvements along Market Street to reduce the potential for conflicts. In addition, a trial program in effect since September 2009 has closed eastbound Market Street to private vehicular traffic, forcing drivers to make right turns at Tenth and Eighth Streets, and installed experimental wide green bike lanes physically separated from vehicles, both east and west of Tenth Street.

Pedestrian level of service (LOS) is based on crowding—for sidewalks, the LOS scale measures the number of pedestrians passing along the sidewalk (fewer pedestrians is better), while for crosswalks and street corners, the LOS is based on the area available to each pedestrian (greater area is better). In each case, LOS A represents less crowding, while LOS F represents extreme congestion.

<sup>21</sup> Damon Curtis, Municipal Transportation Agency, personal communication with Michael Jacinto, MEA, January 25, 2010.

### **Parking**

In general, on-street parking in the project site vicinity consists of metered or time-limited parallel parking; most of the metered parking is limited to 15 minutes or one hour. There are several yellow and white loading zones located near businesses, including along Fremont Street and Beale Street. Designated motorcycle parking is also provided, including on the west side of Fremont Street near Mission Street and the west side of Beale Street near Mission Street. Parking is prohibited on many area streets during the morning and evening commute periods, including Mission Street and Fremont Street.

Surveys of existing publicly available on-street and off-street parking capacity and occupancy were taken in the area generally bounded by California, Spear, Folsom, Second, and Sansome Streets. There are about 6,125 off-street parking spaces in some 40 lots and garages within the study area, with mid-afternoon weekday occupancy levels at about 85 percent. On-street parking south of Market Street is about 80 to 85 percent occupied in the weekday midday hours, while occupancy is near 100 percent north of Market.

## **Impacts**

### Significance Criteria

The impacts analysis describes the potential impacts that the proposed project could have on traffic, transit, pedestrian, bicycle, loading, construction impacts on transportation and circulation, and emergency vehicle circulation. The analysis also provides a parking analysis for informational purposes. Below is a list of significance criteria used by the San Francisco Planning Department to assess whether a proposed project would result in significant impacts. These criteria are organized by mode to facilitate the transportation impact analysis; however, the transportation significance thresholds are essentially the same as the ones in the environmental checklist (Appendix G of the State CEQA Guidelines), which has been adopted and modified by the San Francisco Planning Department. For purposes of this analysis, the following applicable thresholds were used to determine whether implementation of the proposed project would result in a significant impact related to transportation and circulation.

• Traffic: The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection level of service to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F.<sup>22</sup> The project may result in significant adverse impacts at intersections that operate at LOS E or F under existing conditions depending upon the magnitude of the project's contribution to the worsening of the average delay per vehicle. In addition, the project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels.

Traffic operations are characterized using a peak-hour vehicular level of service (LOS) analysis, which provides a standardized means of rating an intersection's operating characteristics on the basis of traffic volumes, intersection capacity, and delays. LOS A represents free-flow conditions, with little or no delay, while LOS F represents congested conditions, with extremely long delays; LOS D (moderately high delays) is considered the lowest acceptable level in San Francisco.

- Transit: The project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenlines analysis, the project would have a significant effect on the transit provider if project-related transit trips would cause the capacity utilization standard to be exceeded during the PM peak hour.
- **Pedestrians:** The proposed project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.
- Bicycles: The project would have a significant effect on the environment if it would create
  potentially hazardous conditions for bicycles or otherwise substantially interfere with bicycle
  accessibility to the site and adjoining areas.
- Loading: A project would have a significant effect on the environment if it would result in a
  loading demand during the peak hour of loading activities that could not be accommodated within
  proposed on-site loading facilities or within convenient on-street loading zones, and create
  potentially hazardous conditions or significant delays affecting traffic, transit, bicycles or
  pedestrians.
- Emergency Vehicle Access: The project would have a significant effect on the environment if it would result in inadequate emergency access.
- Construction: Construction-related impacts generally would not be considered significant due to their temporary and limited duration. However, project- or site-specific conditions could warrant a different finding.

San Francisco does not consider parking supply as part of the permanent physical environment.<sup>23</sup> The Planning Department acknowledges, however, that parking conditions may be of interest to the public and decision-makers. Therefore, this report presents a parking analysis for informational purposes.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact. (CEQA Guidelines Section 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there

Under California Public Resources Code (CEQA) Section 21060.5, "environment" can be defined as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise and objects of historic or aesthetic significance."

may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" Policy. The City's Transit First Policy, established in the City's Charter Article 8A, Section 8A.115, provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

In summary, changes in parking conditions are considered to be social impacts rather than impacts on the physical environment. Accordingly, the parking analysis in this EIR is presented for informational purposes only.

## **Impact Analysis**

#### Travel Demand Analysis

The project would generate about 298 and 285 net new person trips during the a.m. and p.m. peak hours, respectively, of which about 27 percent would be vehicle trips (81 in the a.m. peak hour and 77 in the p.m. peak hour). In the a.m. peak hour, there would be 166 transit trips and 24 walking trips, and the remainder (11) would be made by other modes such as bicycle, motorcycle and taxi. Corresponding numbers in the p.m. peak-hour would be 156 transit trips, 25 walking trips, and 11 other-mode trips.

The project would be subject to a variety of transportation management requirements under *Planning Code* Section 163, whose intent is to assure that adequate measures are undertaken and maintained to minimize transportation effects of added office employment in the Downtown and South of Market area, by facilitating the effective use of transit, encouraging ridesharing, and employing other practical means to reduce commute travel by single-occupant vehicles.

The 81 and 77 vehicle trips represent 97 and 93 person-trips by vehicle in the a.m. and p.m. peak hours, respectively; the number of vehicle trips is less than the number of person trips by vehicle because some person trips are made in vehicles carrying more than one person.

#### Traffic Impacts

Impact TR-1: Traffic generated by the proposed project would incrementally increase average vehicle delay, but would not degrade level of service at local intersections. (Less than Significant)

Of the approximately 80 net new vehicle trips generated by the project in the a.m. and p.m. peak hours, about 51 percent would be to or from locations within San Francisco, while the remainder would be headed to or from the East Bay, the Peninsula/South Bay, and the North Bay. East Bay-bound vehicles would make up approximately 16 percent of the outbound vehicle trips, or about 14 additional cars heading for the East Bay (assumed to be via the Bay Bridge) in the p.m. peak hour. These 14 additional cars would incrementally contribute to the substantial queuing that currently occurs on access routes to the Bay Bridge, such as First Street. Peninsula/South Bay-bound traffic would amount to about 25 percent of outbound vehicle trips (21 new vehicles), which likewise would incrementally contribute to queuing that now occurs at southbound access routes, such as the on-ramp at Fourth/Harrison Streets.

As shown in Table 2, six of the 11 signalized intersections studied currently operate at acceptable (LOS D or better) service levels during the p.m. peak hour. The other five intersections—First Street at Market, Mission, Howard, and Harrison Streets and Howard/Beale Streets—operate at an unacceptable LOS E or F. Of these intersections, the four on First Street are located on the primary approaches to I-80 and the Bay Bridge, and traffic to the bridge also passes through the fifth intersection (Howard/Beale Streets). Three of the study intersections—Fremont Street at Howard, Mission, and Market-Front Streets—were also analyzed for the a.m. peak hour due to heavy morning volumes on Fremont Street. All three Fremont Street intersections operate at acceptable LOS in the a.m. peak hour. The intersections selected for analysis were chosen because they would be the most likely to be affected by project traffic. While project-generated vehicles would also travel through other intersections, they would have less impact on intersections farther from the project site, as vehicles would disperse among the available streets as they travel away from the project site.

With the addition of project traffic,<sup>25</sup> operating conditions at the study intersections would remain very similar to those under existing conditions: there would be no degradation in level of service, and the average delay per vehicle would increase by 3 seconds or less, in both the a.m. and p.m. peak hours.<sup>26</sup> Moreover, project traffic would represent no more than 1.4 percent of the volume of any "critical movement" (traffic movements through an intersection that most strongly influence intersection LOS) at intersections already operating at unacceptable LOS (LOS E or F), which is not regarded as a

Because the proposed on-site parking garage would not accommodate the peak parking demand, some vehicle-trips generated by the project would need to use other off-street parking facilities; these vehicles were directly assigned to other parking facilities in the study area that have available capacity.

<sup>26</sup> In certain instances, the average delay would decrease slightly; this results when the overall intersection delay remains similar and increased volume in traffic movements with less delay is greater than the increased volume in movements with more delay per vehicle, thus decreasing the weighted average by movement.

TABLE 2
PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS)
AND AVERAGE STOPPED DELAY IN SECONDS PER VEHICLE<sup>a</sup>

Intersection	Existing		Existing + Project		Cumulative (2030) <sup>D</sup>		Project Contribution
	LOSd	Delay <sup>d</sup>	LOSd	Delay <sup>d</sup>	LOSd	Delay <sup>d</sup>	To Cumul. <sup>c</sup>
P.M. PEAK HOUR					***************************************	a prior	
1. First Street / Market Street	E	72.7	E	72. <u>4</u>	F	>80 0.5% (v/c = 1.44)	(EBR)
2. First Street / Mission Street	E	69.2	E	72.2	F	>80 (v/c = 2.69)	0.7% (SBR)
3. First Street / Howard Street	E	74.3	E.	77.0	F	>80 (v/c = 2.72)	2.2% (SBR)
4. First Street / Harrison Street	F	>80.0 (v/c = 1.36)	F	>80.0 (v/c = 1.36)	F	>80 (v/c = 1.35)	0.6% (SBT)
5. Fremont / Market / Front Streets	В	19.1	В	20.0	F	>80 (v/c = 1.60)	0.6% (NBT)
6. Fremont Street / Mission Street	С	24.5	С	25.1	F	>80 (v/c = 2.00)	0.4% (NBT)
7. Fremont Street / Howard Street	D	48.6	D	50.2	F	>80 (v/c = 1.65)	1.6% (EBL)
8. Beale / Market / Davis / Pine Streets	С	31.6	С	31.5	F	>80 (v/c = 1.18)	0.0%
9. Beale Street Mission Street	D	35.2	D	37.6	F	>80 (v/c = 1.03)	0.6% (SBT)
10. Beale Street / Howard Street	E	76.2	E	79.0	F	>80 (v/c = 2.12)	1.3% (SBR)
11. The Embarcadero / Mission Street	D	42.1	D	42.1	F	>80 (v/c = 1.26)	0.0%
A.M. PEAK HOUR			To a series of the series of t		Profile on a production of the state of the	To a second seco	
5. Fremont / Market / Front Streets	С	24.3	С	24.5	F	>80 (v/c = 1.48)	0.1% (NBT)
6. Fremont Street / Mission Street	D	38.8	D	40.5	F	>80 (v/c = 1.92)	1.1% (NBT)
7. Fremont Street / Howard Street	D	46.8	D	48.8	F	>80 (v/c = 1.70)	0.8% (NBT)

<sup>a</sup> Levels of service (LOS) were determined using the analysis methodologies presented in the 2000 *Highway Capacity Manual*.

**Bold** typeface indicates a significant project or cumulatively impact.

SOURCE: AECOM

b Cumulative volumes were derived on the basis of information about traffic growth patterns, which used the San Francisco County Transportation Authority countywide travel demand forecasting model, taking into account the development anticipated in the vicinity of 350 Mission Street, plus the expected growth in housing and employment for the remainder of San Francisco and the nine-county Bay Area.

C Project's maximum percent contribution to cumulative volume in critical movement at intersections projected to operate at LOS E or F. Bold typeface signifies a cumulatively considerable contribution to LOS F conditions (a significant impact), based on the project's contribution to the intersection's critical turning movements; that is, whether the project would add a substantial number of vehicles to these movements (see page 48 for further discussion of the method for determining impact significance). NB, SB, EB, WB indicates traffic direction (e.g., northbound); L, T, R indicates traffic movement through intersection (Left Turn, Through, Right Turn).

d The LOS and delay for signalized intersections represent conditions for the overall intersection. For an intersection operating at LOS E or F with delay in excess of 80 seconds, the volume-to-capacity ratio (v/c) is presented to provide another measure of how the intersection is operating.

"considerable" contribution to the existing degraded operation. Therefore, the project would result in less-than-significant impacts on intersection operations.

### **Cumulative Traffic Impacts**

Impact TR-2: Traffic generated by the proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would degrade level of service at certain local intersections, but project traffic would not contribute considerably to degraded intersection operations. (Less than Significant)

Cumulative traffic impacts were assessed by adding projected traffic increases from anticipated future local development (including projects proposed within the Transit Center District Plan [TCDP] study area, as well as changes to the lane configurations of the street network proposed as part of the TCDP and the Bicycle Plan) to future baseline volumes derived from the San Francisco County Transportation Authority countywide travel demand forecasting model. Due to the substantial increase in development anticipated for the South Financial District area by 2030, all 11 of the study intersections would operate at unacceptable LOS F under 2030 cumulative conditions in the p.m. peak hour (as compared to five intersections operating at LOS E or F under Existing conditions). Additionally, all three intersections analyzed in the a.m. peak hour would also operate at LOS F.

To assess the effect of added traffic generated by the project on the above-described LOS. F cumulative 2030 conditions, the project percent contribution to the traffic volumes at the critical movements was evaluated to determine whether the project contribution to a critical movement would be substantial. As shown in Table 2, traffic from the proposed project would comprise no more than 2.2 percent of any critical movement at any of the 11 intersections in the p.m. peak hour, and no more than 0.8 percent of any critical movement at any of the three intersections analyzed in the a.m. peak hour. In no instance was it determined that project traffic would constitute a cumulatively considerable contribution to adverse 2030 cumulative traffic conditions, and therefore the project would have a less-than-significant impact on cumulative traffic conditions. That determination was reached based on the examination of the traffic volumes for the vehicle movements that determine the overall level of service performance at the intersections projected to operate at LOS. F under 2030 cumulative conditions. As shown in Table 2, the project would not add substantial numbers of vehicles to turning movements that determine the overall LOS. F performance (i.e., "critical" movements) at any of the study intersections.

It is noted that traffic from the 350 Mission Street project and from other projects considered in the cumulative analysis would affect intersections other than those included in the project-specific analysis for 350 Mission Street. Traffic destined for the Bay Bridge and for other freeway on-ramps in or near the TCDP Study Area would continue to experience congestion in the p.m. peak hour, and the project would contribute incrementally to increased delays at some of these intersections. Under both existing-plus-project and cumulative conditions, however, project traffic would have less impact on intersections farther from the project site as vehicles bound for different destinations disperse. Projected congestion

levels could be somewhat less if measures to enhance transit service and encourage the use of alternate means of transportation are successful.

#### **Transit**

Impact TR-3: Transit ridership generated by the proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent transit capacity resulting in unacceptable levels of transit service, or cause a substantial increase in delays or operating costs. (Less than Significant)

The project would generate approximately 166 net new a.m. peak-hour transit trips, and about 156 net new transit trips in the p.m. peak hour; about 94 percent of transit trips would be made in the peak direction (inbound in the morning and outbound in the afternoon). Of these trips, about half would be on Muni in the morning peak hour, and slightly more than half would be entirely on Muni in the afternoon peak hour, with the remainder being made primarily by regional transit. Muni trips would be dispersed over the more than 15 Muni routes (local and express buses, streetcar and Metro trains) that serve the project area. Project transit ridership in the peak direction would incrementally increase p.m. peak-period capacity utilization<sup>27</sup> at the four Muni screenlines (which are imaginary cordon lines drawn around the greater downtown area for purposes of analyzing Muni ridership by corridor). All Muni screenlines currently operate better than Muni's service standard of 85 percent capacity utilization in both the morning and afternoon peak hours,<sup>28</sup> although the Metro corridors (Southwest screenline) currently exceed the standard. However, the increase in ridership due to the project would be no more than 1 percentage point on any corridor, and would not be significant, inasmuch as the increased ridership would be dispersed over dozens of Muni vehicles and would not result in exceedances of Muni capacity. The project would be subject to the Transit Impact Development Fee, which is a one-time fee assessed against downtown office projects to offset increased capital costs to Muni to provide additional capacity to serve the increased demand from new development.

Peak-direction project ridership on regional carriers would total about 80 in the morning peak hour and 70 in the afternoon peak hour (some riders would also take Muni), with about half traveling to and from the East Bay on BART, and another third to and from the Peninsula on BART. Project transit trips would increase East Bay and Peninsula BART p.m. peak-period capacity utilization by less than 1 percentage point, and would not meaningfully affect capacity utilization on AC Transit, Golden Gate Transit, SamTrans, or Caltrain service (with five or fewer net new riders on each). None of the regional carriers'

Capacity utilization is the aggregate number of passengers divided by the aggregate design capacity of the transit vehicles, and may include varying numbers of standees, depending on the transit carrier.

Muni's service standard is based on differing capacities of its fleet's various sizes of buses and rail vehicles.

capacity utilization standards would be exceeded with project transit trips.<sup>29</sup> Therefore, project effects on regional transit ridership would be less than significant.

By 2030, ridership levels on Muni lines is projected to generally grow faster than increases in capacity, and overall peak-hour ridership across the four screenlines, as a percentage of overall capacity, would increase substantially from existing conditions, with the northeast screenline exceeding Muni's 85-percent standard in the a.m. peak hour, along with several individual corridors, and the southeast screenline exceeding the standard in the p.m. peak hour, also along with several individual corridors. In some cases, capacity utilization on individual corridors would exceed 95 percent, with ridership on vehicles approaching the capacity for seated and standing passengers. However, project-generated ridership would represent less than one percent of the growth in Muni ridership at the four screenlines, and would make up one-fourth of one percent of total 2030 cumulative transit ridership at the screenlines. Therefore, the project would not make a considerable contribution to cumulative Muni conditions, and the project would have a less-than-significant cumulative impact on Muni operations.

Similarly, by 2030, ridership levels on regional transit lines are projected to increase faster than increases in capacity, with both East Bay BART service and Golden Gate Transit bus service anticipated to be operating in excess of their respective load factor standards in both the a.m. and p.m. peak hours. BART trains in the Transbay Tube are projected to approach 160 percent of seated capacity entering San Francisco in the morning peak hour and 140 percent of seated capacity in the afternoon peak hour, up from 123 percent and 120 percent, respectively, under existing conditions. However, project ridership would comprise less than one-third of one percent of the growth in ridership from existing conditions to 2030, and about one-tenth of one percent of the total. The proposed project, therefore, would not make a considerable contribution to cumulative conditions on BART. Golden Gate transit buses would operate at as much as 117 percent of seated capacity (p.m. peak hour), an increase from the existing 63 percent. A projected two p.m. peak-hour Golden Gate Transit bus riders generated by the 350 Mission Street project, however, would make no meaningful impact on Golden Gate Transit operations. As under existing-plus-project conditions, project ridership on other regional carriers, at five or fewer passengers, would not result in a significant impact.

Because of the relatively limited effect of the project in the context of long-range cumulative growth, the project contribution would not be "considerable." Therefore, the project would not have a significant impact on transit ridership and capacity, and no mitigation is required.

Impact TR-4: Traffic entering and exiting the proposed project garage on Fremont Street could interfere with, and be delayed by, Golden Gate Transit buses boarding at the Fremont Street curb, potentially obstructing pedestrian traffic on the east sidewalk of Fremont Street and potentially resulting in safety hazards. (Significant but Mitigable)

Golden Gate Transit, AC Transit and Caltrain have a passenger-per-seat standard of 100 percent. BART has a peak-hour passenger-per-seat standard of 135 percent.

As noted in the setting, the Golden Gate Transit stop for lines 26, 27, and 44 is located immediately adjacent to the project's frontage along the east side of Fremont Street. The location of the proposed project driveway about 100 feet north of Mission Street would increase the potential for conflicts between vehicles entering and exiting the project garage and loading vehicles entering and exiting the project loading dock, on the one hand, and Golden Gate Transit buses and passengers boarding those buses, on the other. Vehicles entering and exiting the garage could potentially impede passenger boarding, as well as inhibit bus maneuverability when approaching the stop or reentering the flow of traffic on Fremont Street. For instance, a vehicle entering the project garage may need to make a turn immediately in front of buses, which could create conflicts and delay bus operations. As a result, the proposed project would have a significant impact related to transit service. Mitigation Measure M-TR-4a would reduce this impact to a less-than-significant level by moving two Golden Gate Transit bus stops away from the proposed project driveway.

### Mitigation Measure

#### M-TR-4a

Relocation of Golden Gate Transit Bus Stops: The project sponsor would work with the Golden Gate Bridge, Highway, and Transportation District and the San Francisco Municipal Transportation Authority Sustainable Streets Division to relocate the bus stop for Golden Gate Transit lines 26, 27, and 44 by 20 feet south of its existing location, and to relocate the bus stop for line 38 by 20 feet north of its existing location. The project sponsor would pay any resulting costs, such as for new signage, engineering drawings, and the like.

Relocation of the Golden Gate Transit bus stops would allow adequate space for buses to pull into and out of their bus stops without being affected by vehicles entering and exiting the project garage and loading dock, and would reduce the impact to a less-than-significant level. The relatively small garage capacity (61 spaces), and thus relatively low vehicle activity projected for this driveway (approximately 20 to 25 vehicle movements during the weekday p.m. peak hour), would further minimize the potential for conflicts with buses.

Despite the relocation of the bus stops, conflicts could remain between buses and vehicles leaving the garage, because the proposed project driveway would be located north of one of the relocated Golden Gate Transit bus stops. There would be approximately 10 feet separating the exiting vehicle from the front end of a stopped Golden Gate Transit bus. With a bus halted at this stop for passenger boarding, there would some obstruction of a driver's line-of-sight to Fremont Street northbound traffic, potentially making it difficult for the driver to merge into Fremont Street traffic until the bus has cleared the stop. If a driver attempts to obtain a better view by pulling into the near lane of traffic on Fremont Street, the risk of a collision could arise. Additionally, a driver pulled partially into traffic could obstruct the stopped bus as its driver attempted to merge into Fremont Street traffic. Mitigation Measure M-TR-4b would avoid or substantially reduce such potential conflicts by stationing a garage attendant at the project driveway to assist drivers departing the garage during p.m. peak hours when Golden Gate Transit buses are present.

### Mitigation Measure

M-TR-4b

Garage Attendant: The project sponsor shall ensure that building management employs an attendant for the parking garage, to be stationed at the project's Fremont Street driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with Golden Gate Transit buses and Fremont Street traffic during afternoon periods of Golden Gate Transit use of the site frontage—at a minimum, from 3:00 p.m. to 7:15 p.m., or as required based on Golden Gate Transit schedules. (See also Mitigation Measure M-TR-5a, below.)

### Significance after Mitigation: Less than Significant

Planning Department staff has consulted with Golden Gate Transit concerning this mitigation measure and would coordinate implementation of this measure with the City. Golden Gate Transit staff has tentatively confirmed that the relocated bus stops would be acceptable, provided that sight lines for vehicles exiting the driveway are adequate. Mitigation Measure TR-4b would ensure that drivers existing the garage do not have their line-of-sight obstructed by Golden Gate Transit buses. Therefore, effects related to potential conflicts between garage traffic and Golden Gate Transit buses would be reduced to a less-than-significant level.

Under cumulative conditions, proposed changes to the Fremont Street right-of-way that would be implemented as part of the proposed Transit Center District Plan would remove the parking lanes on both sides of Fremont Street and eliminate one travel lane in order to expand sidewalk widths on both the east and west sides of the street. As a result, Fremont Street would be reduced to three northbound lanes: a transit-only lane for Muni and two mixed-flow lanes. However, the elimination of the parking lane on the east side of the street would mean that Golden Gate Transit would need to stop within the easternmost travel lane to board passengers. The use of this lane for Golden Gate Transit bus stops would obstruct traffic in the curb lane, effectively reducing Fremont Street to one regular travel lane (plus the Muni-only lane) during periods when buses are stopped. The resulting traffic congestion on Fremont Street could impede Golden Gate Transit bus operations as buses would have a difficult time merging from the bus stops into the regular traffic lanes. In addition, the bus stops within the travel lane may result in conflicts with general vehicular traffic, which may be unaware of the upcoming stops. Because this impact would result entirely from the proposed Transit Center District Plan, the proposed 350 Mission Street project would not contribute considerably to the effect, and the project would therefore not have a significant cumulative effect on Golden Gate Transit buses. It should be noted, however, that increased congestion and delays on Fremont Street could result in delays for drivers leaving the project garage.

### **Pedestrian Conditions**

Impact TR-5: The proposed project would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas. (Significant but Mitigable)

Pedestrian entrance to the building lobby would be via sets of doors on both Mission and Fremont Streets, and through a folding glass-panel door system, also on both facades near the corner of Mission and Fremont Streets; these folding doors could remain open during good weather to provide pedestrian openings along almost 75 feet of sidewalk frontage.

As noted in the setting, sidewalks on Mission and Fremont Streets operate at LOS B in both the midday and p.m. peak hour, and crosswalks in the First/Mission Streets intersection operate at a range of between LOS B and LOS D, all of which are considered acceptable. With the project, the four crosswalks would see increased usage but the LOS would not change; the north crosswalk in the First/Mission Streets intersection would operate at LOS D, as under existing conditions, which is acceptable. The Mission and Fremont Street sidewalks would continue to operate at LOS B.

As discussed above under Impact TR-4, vehicles entering and exiting the proposed project garage and loading dock via the driveway on Fremont Street could conflict with Golden Gate Transit buses, which use the curb lane on the project frontage of Fremont Street to board passengers in the p.m. peak hour. All vehicular traffic entering and exiting the parking garage and loading dock would have to cross the sidewalk on the east side of Fremont Street. As this is a major walk route to and from Market Street and the Embarcadero BART / Muni Metro Station, there is a relatively high level of pedestrian traffic on this sidewalk. As such, there is a potential for conflict between project-related vehicular traffic coming to and from the garage via this curb cut and pedestrians on the sidewalk. In addition, vehicles exiting the garage (or loading dock, discussed below under Impact TR-7) and waiting for a gap in the traffic flow to turn right onto northbound Fremont Street could potentially block the sidewalk, creating an unsafe condition for pedestrians. As a result, the project would have a significant impact on pedestrian conditions. Mitigation Measure M-TR-5 would reduce this impact to a less-than-significant level by reducing pedestrian-vehicle conflicts.

### Mitigation Measure

M-TR-5a

Garage/Loading Dock Attendant: The project sponsor shall ensure that building management employs an attendant for the parking garage and loading dock, to be stationed at the project's Fremont Street driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with pedestrians on the sidewalk during the a.m. and p.m. peak periods of traffic and pedestrian activity—at a minimum, from 7:00 a.m. to 9:00 a.m. and from 3:00 p.m. to 7:15 p.m., with extended hours as dictated by traffic and pedestrian conditions and by activity in the project garage and loading dock. (See also Mitigation Measure M-TR-4b, above.)

M-TR-5b

Warning Devices: The project sponsor shall install audible and visible warning devices to alert pedestrians of the outbound vehicles from the parking garage and loading dock.

M-TR-5c Limitation on Loading Dock Hours: The project sponsor shall ensure that building management prohibits use of the loading dock during hours when the adjacent curb lane is used by Golden Gate Transit buses (currently, 3:00 p.m. to 7:15 p.m.).

Significance after Mitigation: Less than Significant

Implementation of Mitigation Measure M-TR-5 would reduce potential pedestrian-vehicle conflicts to a less-than-significant level.

Under cumulative (2030) conditions, pedestrian activity associated with implementation of the proposed Transit Center District Plan and the new Transit Center (replacement of the Transbay Terminal) would result in the north, south, and west crosswalks of the First/Mission Streets intersection operating at an unacceptable LOS E in the p.m. peak hour (the east crosswalk would be at LOS D). The north crosswalk would also operate at LOS E in the midday peak hour, although sidewalks and corners would remain at acceptable levels of service (LOS A or B). Project-generated pedestrian traffic would represent between about 1.5 percent and 4.3 percent of the flow in the crosswalks that would operate at LOS E, which would not be considered to make a considerable contribution to pedestrian congestion. Therefore, the proposed project would not result in a significant cumulative impact related to pedestrian conditions. (All crosswalks that would operate at LOS E under cumulative conditions would do so with or without the project.)

The proposed Transit Center District Plan would make changes to streets and sidewalks in the project vicinity, including the widening of sidewalks along Mission Street and Fremont Street through the removal of on-street parking and travel lanes. In particular, sidewalks on the east side of Fremont Street adjacent to the project site would be widened to 20 feet, while sidewalks on the north side of Mission Street adjacent to the project site would be widened to more than 21 feet. These changes would improve pedestrian flow and safety on sidewalks in response to the substantial increase in pedestrian traffic as a result of future development in the area.

Temporarily increased congestion and/or interruption of pedestrian access and routes could be expected as a result of construction of the planned new Transit Center, which would replace the Transbay Terminal. Likewise, other development in the proposed Transit Center District Plan area would result in similar disruptions. However, the proposed 350 Mission Street project would not be expected to make a considerable contribution to any impacts related to pedestrian circulation, because access to and from the project site could temporarily involve alternate routes to avoid most other construction sites. Therefore, no significant impact would ensue.

## **Bicycle Conditions**

Impact TR-6: The proposed project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (Less than Significant)

There are designated Bicycle Routes in the project vicinity (on the Embarcadero and Market, Howard, Folsom, and Second Streets). Bicyclists were observed on other streets, not so designated, in the project area, although the number of bicyclists was not high. The project would provide 64 bicycle parking spaces on the lower parking garage level, along with of eight showers and lockers, meeting the requirements of *Planning Code* Sections 155.4 and 155.3. The project would not be expected to generate a noticeable increase in bicycles in the area, nor would it be expected to noticeably affect existing bicycle conditions in the area.

Temporarily increased congestion and/or interruption of bicycle access and routes could be expected as a result of construction of the planned new Transit Center, which would replace the Transbay Terminal. Likewise, other development in the proposed Transit Center District Plan area would result in similar disruptions. However, the proposed 350 Mission Street project would not be expected to make a considerable contribution to any impacts related to bicycle circulation, because access to and from the project site could temporarily involve alternate routes to avoid most other construction sites. Therefore, no significant impact would ensue.

Because impacts to pedestrians and bicyclists would be less than significant, no mitigation is required.

### Loading

Impact TR-7: The proposed project would not result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, but could create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles or pedestrians. (Significant but Mitigable)

Under *Planning Code* Section 152.1, the project would be required to provide three off-street (standard truck) freight loading spaces.<sup>30</sup> The *Planning Code* allows the substitution of two service van spaces for each full-size loading space, provided that at least one-half of the required number of spaces is provided for trucks (ignoring any resulting fraction). Application of that substitution formula for the project would yield a requirement for two truck spaces and two van spaces. The project would provide two *Planning Code*-complying standard-truck loading spaces at-grade in the loading dock off Fremont Street, and two service vehicle spaces, also in the loading dock, which would meet the *Planning Code* requirement.

City and County of San Francisco, *Planning Code*, Table 152.1: Off-Street Freight Loading Spaces Required (in C-3 and South of Market Districts). Office buildings are required to provide 0.1 spaces per 10,000 sq. ft. of gross floor area (to closest whole number); the project would have about 430,650 sq. ft of gross floor area for office use, not counting areas excluded from gross floor area as defined in *Planning Code* Sec. 102.9(b).

The project would generate a total of about 96 service vehicle stops per day. Calculated average hourly loading demand would be about five spaces, and peak demand would be about six spaces. The project's two off-street truck loading spaces and two off-street van spaces would not meet the average and peak demand. Fremont Street has yellow on-street parking spaces (for short-term loading) along the project frontage, which are designated for loading use between 9:00 a.m. and 3:00 p.m. These spaces could help accommodate project loading activities. However, these spaces are not available between before 9:00.a.m (to provide an additional travel lane on Fremont Street) and after 3:00 p.m. (to accommodate Golden Gate Transit bus stops). During this time, loading vehicles would need to find alternative loading locations in the vicinity of the project site. It should be noted that since most of the daily deliveries would be smaller trucks and vans to the office uses, these could also be accommodated at regular on-street parking spaces. Therefore, no significant impact would be anticipated due to demand for freight loading activity.

However, as noted under Impact TR-5 concerning pedestrian-vehicle conflicts, there is a relatively high level of pedestrian traffic on the Fremont Street sidewalk adjacent to the project site. Therefore, the project would result in the potential for conflict between project-related loading vehicle traffic and pedestrians on the sidewalk. In addition, loading vehicles exiting the loading dock and waiting for a gap in the traffic flow to turn right onto northbound Fremont Street could potentially block the sidewalk, creating an unsafe condition for pedestrians. As a result, the project would have a significant impact on pedestrian conditions related to loading activity. Mitigation Measure M-TR-5a, p. 53, would reduce this impact to a less-than-significant level by reducing pedestrian-loading vehicle conflicts.

The proposed project would require an exception from the requirements of *Planning Code*Section 155(r)(4), which prohibits curb cuts along Transit Preferential Streets where an alternative frontage is available, for the proposed garage/loading dock curb cut on Fremont Street. As both Fremont and Mission Streets are identified as Transit Preferential Streets in the *General Plan* Transportation Element, no alternative frontage is available on the project site for a curb cut. Mission and Fremont Streets are both Primary Transit Streets, although the designation for Mission Street (Transit-Oriented Street) is one level higher than that for Fremont Street (Transit-Important Street). Accordingly, Fremont Street, as the lesser of the two in transit importance, would be favored over Mission Street as the site for a curb cut.

Given the width of the proposed project driveway, trucks longer than 30 feet could not be accommodated because the available maneuvering room would be insufficient. In addition, trucks would have to enter from and exit to the center lane on Fremont Street to satisfy turning-radius requirements. As a result, access into the project's loading dock would need to be restricted to trucks 30 feet in length or shorter. If trucks longer than 30 feet attempt to access the loading dock, they would have difficulties and could create traffic impacts along Fremont Street. To help avoid this issue, the loading dock supervisor would be required to educate the building tenants on the required use of shorter trucks, and would need to prohibit access to the dock by trucks longer than 30 feet.

### Mitigation Measure

M-TR-7

**Limitation on Truck Size:** To ensure that trucks longer than 30 feet in length are not permitted to use the loading dock, the project sponsor would ensure that office and retail tenants in the building are informed of truck size limitations. In the event that trucks

larger than 30 feet in length attempt to access the loading dock, the garage/loading dock attendant (see Mitigation Measure M-TR-5a) would direct these trucks to use on-street loading zones (if available) or off-load deliveries to smaller trucks off-site and return to use the loading dock.

Typically, a building property manager dictates the maximum size of trucks that can be accommodated by a building's loading dock, and when trucks may access the project site. Trucks not complying with the building's standards regarding loading activities are generally turned away.

Significance after Mitigation: Less than Significant

Passenger Loading. The project does not propose dedicated curbside passenger loading zones, as there is limited curb space available adjacent to the project site to serve passenger loading needs. However, passenger loading could occur from the on-street parking spaces and current loading spaces along the east curb of Fremont Street, except between 7:00 a.m. and 9:00 a.m. and 3:00 p.m. and 7:15 p.m., when the parking lane is restricted. Similarly, passenger loading could occur from the on-street parking and current loading spaces along the north curb of Mission Street, except between 3:00 p.m. and 6:00 p.m. During these periods, passenger loading would need to occur from other on-street spaces in the vicinity to reduce the potential for private vehicle pick-up and drop-off activities to conflict with Muni operations along Mission Street and Golden Gate Transit operations along Fremont Street. However, assuming enforcement of the No-Stopping restrictions, no significant effect would ensue.

# **Emergency Access**

Impact TR-8: The proposed project would not result in inadequate emergency access. (Less than Significant)

The project site is accessible from both Fremont and Mission Streets. Access directly into the building for emergency vehicles would be provided via the parking garage driveway on Fremont Street, with additional access at street level on foot through the building lobby. Because the proposed project would not add a substantial number of vehicles to the surrounding streets—approximately 80 vehicles in each of the weekday a.m. and p.m. peak hours—the project is not expected to cause any substantial congestion that would affect emergency vehicle response. The project also proposes no modifications to the roadway network. Overall, the project would not result in any significant impacts to emergency vehicle access.

### **Construction Impacts**

Impact TR-9: Project construction, along with construction of the planned Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation. (Significant and Unavoidable)

During the projected 22-month construction period, temporary and intermittent traffic and transit impacts would result from truck movements to and from the project site. It is expected that staging would be achieved by having scheduled deliveries due to the lack of onsite storage area; the majority of the job would be staged from Mission and Fremont Streets, in a manner consistent with traffic management strategies established in consultation with City staff. Staging and project construction is not anticipated to require relocation of the existing Golden Gate Transit bus stops along the project site's Fremont Street frontage. If temporary relocation were necessary, it is possible that Golden Gate Transit could use portions of the curb lane on Fremont Street farther north, closer to Market Street, which would not be expected to result in substantial disruption of Golden Gate Transit bus service, and thus would have a less-than-significant impact.

During the construction period, between about 20 and 54 daily truck trips would be generated, depending on the phase of work. Truck movements during periods of peak traffic flow would have greater potential to create conflicts than during non-peak hours because of the greater numbers of vehicles on the streets during the peak hour that would have to maneuver around queued trucks. The sponsor would restrict project-related truck traffic to the hours of 9:00 a.m. to 3:30 p.m., or other hours if approved by the Municipal Transportation Agency Sustainable Streets Division (MTA/SSD), which would avoid such peak-period effects. The project sponsor has agreed to meet with Muni, MTA/SSD, and other responsible city agencies and other project construction managers in the area to determine feasible traffic management and mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. Project-related construction activity, including both construction truck traffic and additional vehicular traffic from construction workers, would not substantially affect vehicular, pedestrian, and bicycle circulation. In addition, any potential impacts would not be considered significant due to their temporary and limited duration, which would further reduce the severity of potential impacts. As a result, construction impacts would be less than significant.

To minimize impacts due to lane closures during construction, the project sponsor and/or construction contractor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later become known. The sidewalks on Mission and Fremont Streets would be closed during portions of the project construction, but a protected pedestrian walkway would be provided in the curb lane on Mission and Fremont Streets, subject to the granting of a Street Space Permit from the Bureau of Street Use and Mapping of the Department of Public Works, and a Special Traffic Permit from the Municipal Transportation Agency Sustainable Streets Division would be required to utilize public street space during project construction; this permit would consider effects on traffic and parking, including bicycle circulation, and MTA could implement additional signage and other measures to ensure bicycle safety during construction. Parking of construction workers' vehicles would temporarily increase occupancy levels in off-street parking lots, either by those vehicles or by vehicles currently parking in on-street spaces that would be displaced by construction workers' vehicles. The foregoing

coordination would ensure that project construction would not result in a significant effect on traffic, transit, pedestrian or bicycle conditions, freight loading, or emergency vehicle access.

In terms of cumulative impacts, other projects may be under construction in the project site vicinity at the same time as the proposed project. Primarily, demolition of the existing Transbay Terminal (located diagonally south across the Mission/Fremont Streets intersection) began in August 2010 and, along with construction of the new Transit center, will last several years, until approximately 2017. Assuming that the 350 Mission project is under construction between 2011 and 2013, project construction would overlap with construction activity for the Transbay Terminal and Transit Center.

No detailed construction plans have been prepared for the new Transit Center. However, given the magnitude of that project, it is possible that construction of the Transit Center could require relocation of one or both of the two Golden Gate Transit bus stops on the east side of Fremont Street south of Mission Street (i.e., south of the 350 Mission Street site). Potential options for relocation of these stops could be along curb space north of Mission Street, alongside the four stops on that segment of Fremont Street. As parking is not permitted on the east side of Fremont Street between 3:00 p.m. and 7:00 p.m., these stops could feasibly be relocated closer to Market Street, north of the existing four Golden Gate Transit stops. However, if relocation of the bus stops south of Mission Street were to be required while the 350 Mission Street project is under construction, identifying a relocation site could be more difficult.

As detailed construction planning for the Transit Center proceeds, the Transbay Joint Powers Authority (sponsor of the Transit Center project) would coordinate with the San Francisco Municipal Transportation Agency and with Golden Gate Transit staff to secure curb space for these two Golden Gate Transit bus stops south of Mission Street, if necessary.

In addition to potential disruption of transit stops, construction of the new Transit Center and other developments in the area would result in increased traffic levels, due to employees, excavation, and the delivery of construction materials via trucks. There are several other projects for which the Planning Department has applications on file in proximity to the 350 Mission Street site. These include high-rise projects at the northwest corner of First and Mission Streets, on Fremont Street south of the new Transit Center site, and on Tehama Street between First and Second Streets. Other potential projects identified in the analysis for the Transit Center District Plan include towers on Mission Street between First and Second Street (Golden Gate University site) and on the north side of Howard Street between First and Second Streets. Although there is no definitive schedule for these projects, if one or more were to overlap with the 350 Mission Street project and the new Transit Center, additional congestion, as well as potential conflicts with pedestrians and bicyclists, could be expected. Construction vehicles could result in some additional congestion and circulation issues in the immediate vicinity of the individual project sites.

Given the number of relatively large projects proposed in the vicinity and the uncertainty concerning construction schedules, it is conservatively assumed that cumulative construction impacts could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles that could be significant. The proposed 350 Mission Street project is assumed to proceed with construction in advance of other projects in the vicinity, because, unlike the other projects noted above, the 350 Mission Street project does

not require zoning changes (i.e., increased height limit) proposed as part of the Transit Center District Plan. These changes are required prior to any approval of the other projects noted above. As a result, work on the 350 Mission Street project would overlap with work on the new Transit Center, but might not overlap with most other projects in the vicinity. Moreover, as noted above, the project sponsor and/or construction contractor would coordinate with construction contractors for any concurrent nearby projects, including the new Transit Center. Nevertheless, despite the best efforts of the project sponsor and project construction contractor, it is possible that simultaneous construction of the proposed project and the Transit Center could result in substantial disruption to Golden Gate Transit operations, should both projects simultaneously preclude use of the Fremont Street curb lane as an afternoon bus embarkation site. Therefore, under Mitigation Measure M-TR-9a, Golden Gate Transit buses would relocate boarding activities to the existing boarding island in Fremont Street immediately south of Market Street during construction of the proposed project. This island, located adjacent to the left lane of Fremont Street, currently serves Muni lines 38, 38L, 71, and 71L. However, Muni will discontinue use of this island in December 2010 when these bus lines are relocated to the Temporary Transbay Terminal at Howard and Beale Streets. Additionally, Mitigation Measure TR-9b would ensure coordination between transit operators and project sponsors/construction managers to minimize potential transit disruption.

### Mitigation Measures

M-TR-9a

Construction-Period Golden Gate Transit Bus Stop Relocation: To minimize potential disruptions to Golden Gate Transit during project construction, Golden Gate Transit buses would use the existing boarding island adjacent to the left lane of Fremont Street during construction of the proposed project, assuming Golden Gate Transit determines that this location is the most feasible choice and the Municipal Transportation Agency concurs with use of the island.

M-TR-9b

Construction Coordination: To minimize potential disruptions to Golden Gate Transit (and other transit operators), the project sponsor and/or construction contractor would coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Golden Gate Transit, as well as Muni, AC Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.

**Significance after Mitigation:** Both Golden Gate Transit and the San Francisco Municipal Transportation Agency have tentatively concurred in the potential use by Golden Gate Transit of the Fremont Street boarding island during construction of the 350 Mission Street project. However, because no formal arrangement has been made, and because the timing and nature of cumulative Transit Center

Ron Downing, Director of Planning, Golden Gate Bridge, Highway, and Transportation District, letter to Brett Bollinger, San Francisco Planning Department, August 11, 2010; and Jerry Robbins, Municipal Transportation Agency, Memo to Brett Bollinger, Planning Department/MEA, September 13, 2010. These documents are available at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E.

construction cannot be known at this time, this impact is conservatively judged to be significant and unavoidable.

## **Parking**

The proposed project is in the C-3-O (Downtown Office) zoning district, in which off-street parking is not required for commercial uses, and is permitted for up to 7 percent of gross floor area. The project parking garage would accommodate up to about 61 parking spaces (capacity for about 80 vehicles through the use of valet parking operations). The project would not exceed 7 percent of gross floor area devoted to parking, and would thereby comply with *Planning Code* Section 151.1.

The project would create long-term parking demand for about 174 parking spaces, and short-term parking demand for about 64 equivalent daily spaces, for a total parking demand of about 238 daily spaces. The project would thus result in unmet demand of about 158 equivalent daily spaces, when accounting for the proposed 80-vehicle capacity. As discussed in the setting, existing parking in the vicinity is used at approximately 85 percent of capacity. The project shortfall would increase this parking usage to about 88 percent, assuming no change in travel modal splits and no use of on-street parking spaces. Cumulative development would result in a further decrease in the parking supply in the project vicinity: development of the new Transit Center, in particular, would displace several hundred parking spaces, including 260 spaces in the existing terminal and approximately as many valet-operated spaces on surface lots outside the terminal. Additional spaces would be eliminated by development anticipated on surface lots on Howard, Tehama, and Folsom Streets. (Some spaces have already been displaced on Main Street for construction of the Temporary Transbay Terminal to accommodate bus operations when the Transbay Terminal is demolished, beginning later in 2010).

As noted above in the discussion of Significance Criteria, parking deficits are considered to be social effects, rather than physical impacts on the environment as defined by CEQA. Therefore, parking effects would not be significant.

# Conclusion

In summary, the project would result in a project-specific significant but mitigable impacts related to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage and loading dock via the proposed driveway on Fremont Street; these impacts could be mitigated to a less-than-significant level by relocating Golden Gate Transit bus stops, posting a garage/loading dock attendant, installation of audible warning devices, and limiting loading dock hours. The project would also potentially result in a significant impact with respect to use of the loading dock by larger trucks. This impact could be mitigated to a less-than-significant level by limiting the size of trucks using the dock. The project would not result in significant impacts that could not be mitigated with regard to traffic, transit demand, pedestrian or bicycle conditions, parking or loading demand, or construction.

# C. Air Quality

# Setting

### Criteria Air Pollutants

As required by the 1970 federal Clean Air Act, the United States Environmental Protection Agency (EPA) has identified six criteria air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. EPA calls these pollutants criteria air pollutants because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead are the six criteria air pollutants.

The Bay Area Air Quality Management District's (BAAQMD's) air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the San Francisco Bay Area. Table 3 is a five-year summary of highest annual criteria air pollutant concentrations (2004 to 2008), collected at the BAAQMD's air quality monitoring station at 16th and Arkansas Streets, in San Francisco's lower Potrero Hill area.<sup>32</sup> Table 3 compares measured pollutant concentrations with the most stringent applicable ambient air quality standards (state or federal).

#### Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). The main sources of ROG and NOx, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Table 3 shows that, according to published data, the most stringent applicable standards (state 1-hour standard of 9 parts per hundred million (pphm) and the federal 8-hour standard of 8 pphm) were not exceeded in San Francisco between 2004 and 2008.

# Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-

Data from this single location do not describe pollutant levels throughout San Francisco, as these levels may vary depending on distance from key emissions sources and local meteorology. However, the BAAQMD monitoring network does provide a reliable picture of pollutant levels over time.

TABLE 3
SUMMARY OF SAN FRANCISCO AIR QUALITY MONITORING DATA (2005–2009)

Most Stringent Applicable Standard	Number of Days Standards were Exceeded and Maximum Concentrations Measured				
	2005	2006	2007	2008	2009
9 pphm <sup>a</sup>	0	0	0	0	0
	5.8	5.3	6.0	8.2	7.2
7 pphm <sup>a</sup>	0	0	0	0	0
	5.4	4.6	5.3	6.6	5.6
9 ppm <sup>a</sup>	0	0	0	0	0
	2.1	2.1	1.6	2.3	2.9
50 µg/m³ <sup>a</sup>	0	3	2	0	0
	46	61	70	41	35
35 ua/m³ b	6	3	5	n	1
55 P <b>3</b>				•	35.5
12 µg/m³ <sup>a</sup>	9.5	9.7	8.9	11.7	ND
25 pphm <sup>a</sup>	0	n	n	n	0
_5 pp	7	-	7	6	6
	·		•	· ·	
40 pph <sup>a</sup>	0	0	0	0	ND
40 pp0	_	_	_	-	ND
	Applicable Standard 9 pphm <sup>a</sup>	Most Stringent Applicable Standard  9 pphm <sup>a</sup> 0 5.8 7 pphm <sup>a</sup> 0 5.4  9 ppm <sup>a</sup> 0 2.1  50 μg/m <sup>3 a</sup> 0 46  35 μg/m <sup>3 b</sup> 6 43.6 12 μg/m <sup>3 a</sup> 9.5  25 pphm <sup>a</sup> 0 7	Maximum Co           Applicable Standard         2005         2006           9 pphm <sup>a</sup> 0         0           5.8         5.3           7 pphm <sup>a</sup> 0         0           5.4         4.6           9 ppm <sup>a</sup> 0         0           2.1         2.1         2.1           50 μg/m³a         0         3           46         61         3           43.6         54.3         12 μg/m³a           9.5         9.7           25 pphm <sup>a</sup> 0         0           7         11           40 ppb <sup>a</sup> 0         0	Maximum Concentration           Applicable Standard         2005         2006         2007           9 pphm <sup>a</sup> 0         0         0           5.8         5.3         6.0           7 pphm <sup>a</sup> 0         0         0           5.4         4.6         5.3           9 ppm <sup>a</sup> 0         0         0           2.1         2.1         1.6           50 μg/m³a         0         3         2           46         61         70           35 μg/m³a         6         3         5           43.6         54.3         45.5           12 μg/m³a         9.5         9.7         8.9           25 pphm <sup>a</sup> 0         0         0           7         11         7           40 ppb <sup>a</sup> 0         0         0	Maximum Concentrations Measure Applicable Standard         Maximum Concentrations Measure Applicable 2005         2005         2006         2007         2008           9 pphm <sup>a</sup> 0         0         0         0         8.2         7 pphm <sup>a</sup> 0         0<

Notes: **Bold** values are in excess of applicable standard. "NA" indicates that data is not available. conc. = concentration; ppm = parts per million; pphm = parts per hundred million; ppb=parts per billion; µg/m3 = micrograms per cubic meter ND = No data or insufficient data.

SOURCE: BAAQMD, Bay Area Air Pollution Summary, 2005 – 2009. Available online at: <a href="http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx">http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx</a>; and ARB Air Quality Data; online at: <a href="http://www.arb.ca.gov/adam/index.html">http://www.arb.ca.gov/adam/index.html</a>.

and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. As shown in Table 3, no exceedances of state CO standards were recorded between 2004 and 2008. Measurements of CO indicate maximum 8-hour CO levels approximately 25 percent of the allowable 8-hour standard.

## Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is measured in two size ranges: PM₁₀ for

State standard, not to be exceeded.

b Federal standard, not to be exceeded.

Based on a sampling schedule of one out of every six days, for a total of approximately 60 samples per year.

d Federal standard was reduced from 65 μg/m3 to 35 μg/m3 in 2006.

particles less than 10 microns in diameter, and PM2.5 for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facility operations, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the state Air Resources Board (ARB), studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated that particle pollution "may significantly reduce lung function growth in children." The ARB also reports that statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.<sup>33</sup>

Among the criteria pollutants that are regulated, particulates appear to represent a serious ongoing health hazard. As long ago as 1999, the BAAQMD was reporting, in its *CEQA Guidelines*, that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. High levels of particulates have also been known to exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions.

Table 3 shows that exceedances of the state  $PM_{10}$  standard have routinely occurred in San Francisco. It is estimated that the state 24-hour  $PM_{10}$  standard was exceeded on up to 18 days per year between 2004 and 2008.<sup>34</sup> The BAAQMD began monitoring  $PM_{2.5}$  concentrations in San Francisco in 2002. The federal 24-hour  $PM_{2.5}$  standard was not exceeded until 2006, when the standard was lowered from 65 micrograms per cubic meter ( $\mu g/m^3$ ) to 35  $\mu g/m^3$ . The state annual average standard was not exceeded between 2004 and 2008.

PM2.5 is of particular concern to the San Francisco Department of Public Health (DPH) because epidemiologic studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. As a result, the City enacted Article 38 of the *San Francisco Health Code*, approved November 25, 2008, which requires that, for new residential projects of 10 or more units located in proximity to high-traffic roadways, as mapped by DPH, an Air Quality Assessment be prepared to determine whether residents would be exposed to potentially unhealthful levels of PM2.5. Through air quality modeling, the assessment is conducted to determine if

California Air Resources, Board, "Recent Research Findings: Health Effects of Particulate Matter and Ozone Air Pollution," January 2004. Available on the internet at: <a href="http://www.arb.ca.gov/research/health/fs/PM-03fs.pdf">http://www.arb.ca.gov/research/health/fs/PM-03fs.pdf</a>. This document is also available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E.

<sup>&</sup>lt;sup>34</sup> PM<sub>10</sub> is sampled every sixth day; therefore, actual days over the standard can be estimated to be six times the numbers listed in the table.

annual average concentration of PM2.5 from the roadway sources would exceed a concentration of 0.2 micrograms per cubic meter (annual average).<sup>35</sup> If this standard is exceeded, the project sponsor must install a filtered air supply system, with high-efficiency filters (as applicable), designed to remove at least 80 percent of ambient PM2.5 from habitable areas of residential units. Because the proposed 350 Mission Street project would contain office and restaurant/retail uses, it would not be subject to Article 38.

### Nitrogen Dioxide (NO<sub>2</sub>)

NO<sub>2</sub> is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO<sub>2</sub>. Aside from its contribution to ozone formation, NO<sub>2</sub> can increase the risk of acute and chronic respiratory disease and reduce visibility. NO<sub>2</sub> may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. Table 3 shows that the standard for NO<sub>2</sub> is being met in the Bay Area, and pollutant trends suggest that the air basin will continue to meet these standards for the foreseeable future.

## Sulfur Dioxide (SO<sub>2</sub>)

SO<sub>2</sub> is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO<sub>2</sub> has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. Table 3 shows that the standard for SO<sub>2</sub> is being met in the Bay Area, and pollutant trends suggest that the air basin will continue to meet these standards for the foreseeable future.

### Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses, cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects; children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated.

According to DPH, this threshold, or action level, of 0.2 micrograms per cubic meter represents about 8 – 10 percent of the range of ambient PM2.5 concentrations in San Francisco based on monitoring data, and is based on epidemiological research that indicates that such a concentration can result in an approximately 0.28 percent increase in non-injury mortality, or an increased mortality at a rate of approximately 20 "excess deaths" per year per one million population in San Francisco. "Excess deaths" (also referred to as premature mortality) refer to deaths that occur sooner than otherwise expected, absent the specific condition under evaluation; in this case, exposure to PM2.5. (San Francisco Department of Public Health, Occupational and Environmental Health Section, Program on Health, Equity, and Sustainability, "Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 6, 2008. Twenty excess deaths per million based on San Francisco's non-injury, non-homicide, non-suicide mortality rate of approximately 714 per 100,000. Although San Francisco's population is less than one million, the presentation of excess deaths is commonly given as a rate per million population.)

### **Toxic Air Contaminants**

Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.<sup>36</sup>

In addition to monitoring criteria pollutants, both the BAAQMD and the ARB operate TAC monitoring networks in the San Francisco Bay Area. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that have traditionally been found in the highest concentrations in ambient air, and therefore tend to produce the most significant risk. The BAAQMD operates an ambient TAC monitoring station at its 16th and Arkansas Streets facility in San Francisco. When TAC measurements at this station are compared to ambient concentrations of various TACs for the Bay Area as a whole, the cancer risks associated with mean TAC concentrations in San Francisco are similar to those for the Bay Area as a whole. Therefore, the estimated average lifetime cancer risk resulting from exposure to TAC concentrations monitored at the San Francisco station does not appear to be any greater than for the Bay Area as a region.

#### Diesel Particulate Matter

The ARB identified diesel particulate matter (DPM) as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans.<sup>37</sup> The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. ARB estimated the average Bay Area cancer risk from diesel particulate, based on a population-weighted average ambient diesel particulate concentration, at about 480 in one million, as of 2000. The risk from

In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk, then the applicant is subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

California Air Resources Board, Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines." October 1998. Available on the internet at: <a href="http://www.arb.ca.gov/toxics/dieseltac/factsht1.pdf">http://www.arb.ca.gov/toxics/dieseltac/factsht1.pdf</a>. This document is also available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E.

diesel particulate matter declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, ARB estimated the average statewide cancer risk from DPM at 540 in one million. 38,39

Recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. The ARB community health risk assessments and regulatory programs have produced air quality information about certain types of facilities for consideration by local authorities when siting new residences, schools, day care centers, parks and playgrounds, and medical facilities (i.e., sensitive land uses, or "receptors")<sup>40</sup>. Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals.<sup>41</sup>

In 2000, the ARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. As part of the Plan, the ARB in 2008 approved a new regulation for existing heavy-duty diesel vehicles that will require retrofitting and replacement of vehicles (or their engines) over time such that by 2023, all vehicles must have a 2010 model year engine or equivalent. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 from the 2000 risk. Additional regulations apply to new trucks and to diesel fuel. With new controls and fuel requirements, 60 trucks built in 2007 would have the same soot exhaust emissions as one truck built in 1988. Despite these reductions, the ARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. The ARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including housing and transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, ARB's position is that infill development, mixed use, higher density, transit-oriented development, and other concepts

California Air Resources Board, *California Almanac of Emissions and Air Quality - 2009 Edition*, Table 5-44 and p. 5-44. Available on the internet at: <a href="http://www.arb.ca.gov/aqd/almanac/almanac09/pdf/chap509.pdf">http://www.arb.ca.gov/aqd/almanac/almanac09/pdf/chap509.pdf</a>. Viewed October 24, 2009.

This calculated cancer risk values from ambient air exposure in the Bay Area can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 in one million, according to the National Cancer Institute.

<sup>&</sup>lt;sup>40</sup> As discussed below, parks and playgrounds are generally less sensitive than the other uses listed because exposure times are shorter, resulting in less exposure to pollutants.

California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available on the internet at: <a href="http://www.arb.ca.gov/ch/handbook.pdf">http://www.arb.ca.gov/ch/handbook.pdf</a>.

<sup>42</sup> California Air Resources Board, "Overview of Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles," fact sheet, February 25, 2009; and "Facts About Truck and Bus Regulation Emissions Reductions and Health Benefits," fact sheet, February 25, 2009. available on the internet at: <a href="http://www.arb.ca.gov/msprog/onrdiesel/documents.htm">http://www.arb.ca.gov/msprog/onrdiesel/documents.htm</a>. Reviewed October 24, 2009.

Pollution Engineering, *New Diesel Fuel Rules Start*, website accessed on October 30, 2006: <a href="http://www.pollutioneng.com/CDA/">http://www.pollutioneng.com/CDA/</a>.

that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.<sup>44</sup>

# Roadway-Related Pollutants

Motor vehicles are responsible for a large share of air pollution especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases, and also contribute to particulates by generating road dust and through tire wear. Epidemiologic studies have demonstrated that people living in proximity to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. Air pollution monitoring done in conjunction with epidemiological studies has confirmed that roadway related health effects vary with modeled exposure to particulate matter and nitrogen dioxide. In traffic-related studies, the additional non-cancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet. As a result, the ARB recommends that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day. <sup>45</sup> However, this recommendation is not applicable to the proposed project, which will not create or bring to the vicinity new sensitive receptor(s). In 2008, the City of San Francisco adopted amendments to the *Health Code* (discussed under "Regulatory Setting"), requiring new residential projects near high-volume roadways to be screened for exposure hazards, and where indicated, to conduct an analysis of exposure and to mitigate hazards through design and ventilation.

# **Sensitive Receptors**

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, population subgroups with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and populations with other environmental or occupational health exposures (e.g. indoor air quality) that affect cardiovascular or respiratory diseases. Land uses such as schools, children's day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times

<sup>44</sup> California Air Resources Board, Air Quality and Land Use Handbook; see footnote 41, p. 67.

This recommendation is put forth to minimize potential non-cancer health effects of exposure to pollutants known to increase incidence of asthma and other respiratory ailments, particularly fine particulates, as well as cancer risk from exposure to DPM and chemicals from automobile exhaust. The ARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and acknowledges that land use agencies must balance other considerations, including housing and transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, ARB's position is that infill development, mixed-use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level (California Air Resources Board, *Air Quality and Land Use Handbook*; see footnote 41, p. 67).

are generally far shorter in parks and playgrounds than in residential locations and schools, for example, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. 46 The nearest residential building to the project site is the newly constructed Millennium residential tower, located immediately south, across Mission Street. The nearest licensed child care center is at the PG&E building, at 77 Beale Street, one block east of the project site (with an outdoor play area on Mission Street at Main Street). Several other child care centers are located within about six blocks of the site, on Main, Spear, Harrison, Hawthorne, and California Streets.<sup>47</sup> There are no schools, parks and playgrounds, hospitals, or convalescent homes in the project vicinity. The nearest open spaces to the project site include Justin Herman Plaza (on the Embarcadero to the north and south of Market Streets), Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets), Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along the Embarcadero). There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west. In addition, the proposed Transit Center District Plan would create a new park on the roof of the terminal ("City Park"), as well as a new public open space on the southwest corner of Fremont and Mission Streets ("Mission Square") in association with the proposed Transit Tower.

As noted, motor vehicles are responsible for a large share of air pollution, especially in California. Epidemiological studies have consistently demonstrated that children and adults living in proximity to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. Vehicles also contribute to particulates by generating road dust and through brake and tire wear.

# **Regulatory Setting**

# Air Quality Regulations and Plans

### **Federal Ambient Air Quality Standards**

The 1970 Clean Air Act (last amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all standards by the deadlines specified in the Clean Air Act. The ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public

The factors responsible for variation in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, poorer residents may be more likely to live in crowded substandard housing and be more likely to live near industrial or roadway sources of air pollution.

<sup>47</sup> California Department of Health Services, Community Care Licensing Division, Child Care: Licensing Website search, January 16, 2010. Available on the internet at: <a href="http://www.ccld.ca.gov/docs/ccld\_search/ccld\_search.aspx">http://www.ccld.ca.gov/docs/ccld\_search/ccld\_search.aspx</a>.

most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above the ambient air quality standards before adverse health effects are observed.

The current attainment status for the San Francisco Bay Area Air Basin with respect to federal standards is summarized in **Table 4**. In general, the Bay Area Air Basin experiences low concentrations of most pollutants when compared to federal standards, except for ozone and particulate matter (PM10 and PM2.5), for which standards are exceeded periodically.

In June 2004, the Bay Area was designated as a marginal nonattainment area of the national 8-hour ozone standard. The EPA lowered the national 8-hour ozone standard from 0.80 to 0.75 parts per million effective May 27, 2008. EPA will issue final designations based upon the new 0.75 ppm ozone standard by March 2010. The Bay Area Air Basin is in attainment for other criteria pollutants, with the exception of the 24-hour standards for  $PM_{10}$  and  $PM_{2.5}$ , for which the Bay Area is designated "Unclassified."

### **State Ambient Air Quality Standards**

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological problems in California, there is considerable diversity between the state and national ambient air quality standards, as shown in Table 4. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

In 1988, California passed the California Clean Air Act (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As indicated in Table 4, the Bay Area Air Basin is designated as "nonattainment" for state ozone, PM10, and PM25 standards. The Bay Area Air Basin is designated as "attainment" for most other pollutants listed in the table.

### Air Quality Planning Relative to State and Federal Standards

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the State PM10 standard). In March 2010, the BAAQMD, in cooperation with the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), published the draft 2010 Bay Area Clean Air Plan, which, when adopted, will replace the existing Bay Area 2005 Ozone Strategy, adopted in 2006. The 2010 Plan is scheduled to be adopted as early as September 2010.

TABLE 4
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant		(State) SAAQS <sup>a</sup>		(Federal) NAAQS <sup>b</sup>		
	Averaging Time	Standard	Attainment Status	Standard	Attainment Status	
Ozone	1 hour	0.09 ppm	N	NA	See Note c	
	8 hour	0.07 ppm	N	0.075 ppm	N/Marginal	
Carbon Monoxide (CO)	1 hour	20 ppm	Α	35 ppm	Α	
	8 hour	9 ppm	Α	9 ppm	Α	
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	Α	0.1 ppm <sup>d</sup>	U	
	Annual	0.03 ppm	NA	0.053 ppm	Α	
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	Α	NA	NA	
	24 hour	0.04 ppm	Α	0.14 ppm	А	
	Annual	NA	NA	0.03 ppm	Α	
Particulate Matter (PM <sub>10</sub> )	24 hour	50 μg/m³	N	150 μg/m³	Ú	
	Annual	20 μg/m <sup>3</sup>	N	NA	NA	
Fine Particulate Matter (PM <sub>2.5</sub> )	24 hour	NA	NA	35 μg/m <sup>3</sup>	U	
	Annual	12 μg/m³	N	15 μg/m³	Α	
Sulfates	24 hour	25 μg/m³	A	NA	NA	
Lead	30 day	1.5 µg/m³	Α	NA	NA	
	Cal. Quarter	NA	NA	1.5 μg/m³	Α	
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA	
Visibility-Reducing Particles	8 hour	See Note e	U	NA	NA	

NOTES: A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard;= ppm = parts per million; μg/m³ = micrograms per cubic meter.

SOURCE: Bay Area Air Quality Management District (BAAQMD), Standards and Attainment Status, May 2006. Website Accessed on October 28, 2006: http://www.baaqmd.gov/pln/air\_quality/ambient\_air\_quality.htm.

a SAAQS = state ambient air quality standards (California). SAAQS for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.

NAAQS = national ambient air quality standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM10 standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM2.5 standard is attained when the three-year average of the 98th percentile is less than the standard.

The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005

To attain this standard, the 3-year average of the 98<sup>th</sup> percentile of the daily maximum 1-hour average at each monitor within the area must not exceed 0.1 ppm (effective January 22, 2010).

Statewide visibility-reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

The 2010 Clean Air Plan will update the 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provide a control strategy to reduce ozone, particulate matter, toxic air contaminants, and greenhouse gases in a single, integrated plan; review progress in improving air quality in recent years; and establish emission control measures to be adopted or implemented in the 2010 – 2012 time frame. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others. The 2010 Clean Air Plan will also represent the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard. Until the 2010 plan is adopted, the Bay Area 2005 Ozone Strategy is the applicable air quality plan for the project area.

### **Bay Area Air Quality Management District**

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county region located in the Air Basin. ABAG, MTC, county transportation agencies, cities and counties, and various non governmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

BAAQMD is responsible for attaining and/or maintaining air quality in the Air Basin within federal and State air quality standards. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the Air Basin and to develop and implement strategies to attain the applicable federal and State standards.

In 1999, BAAQMD adopted its *CEQA Guidelines* as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. In May 2010, BAAQMD published an updated and revised version of its *CEQA Air Quality Guidelines*, and the district's board adopted revised thresholds of significance in June 2010. Like the 1999 guidelines, the new guidelines and thresholds are advisory in nature, and local jurisdictions are not required to use the methodology outlined therein. However, because BAAQMD is recognized as the regional agency with special expertise in air quality, the District's guidelines and thresholds are commonly used in CEQA analysis, and are normally relied upon by the Planning Department for its significance determinations.

#### San Francisco General Plan Air Quality Element

The Air Quality Element of the *San Francisco General Plan* is composed of six sections, each of which focuses on different aspects of air quality improvement efforts. As discussed below under Impact AQ-1, the proposed project would result in a significant, unavoidable impact with respect to health risk from construction emissions, based on the newly adopted (June 2010) CEQA guidance published by the BAAQMD. This impact would occur due to proximity of nearby sensitive receptors, including residential units and a child care center. However, the proposed project would be developed in an area well-served by transit and would result in lower long-term emissions than a development in a location not proximate to existing sensitive receptors (for example, outside a dense urban area). Therefore, on balance, the

proposed project would be consistent with the Air Quality Element, because it would not result in violation of federal, state, or local air quality standards and would be largely consistent with the City's policy direction regarding emphasis of transit use over automobiles and energy conservation, and with the Downtown Plan's encouragement of growth near transit.

### San Francisco Dust Control Ordinance

San Francisco Health Code Article 22B, and San Francisco Building Code Section 106.A.3.2.6, collectively the Construction Dust Control Ordinance, requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection (DBI). The Director of DBI may waive this requirement for activities on sites less than one half-acre that are unlikely to result in any visible wind-blown dust.

The project sponsor and the contractor responsible for construction activities at the project site shall use the following practices to control construction dust on the site or other practices that result in equivalent dust control that are acceptable to the Director of DBI. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the *San Francisco Public Works Code*. If not required, reclaimed water should be used whenever possible. Contractors shall provide as much water as necessary to control dust (without creating run-off in any area of land clearing, and/or earth movement). During excavation and dirt-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10 millimeter (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques.

For project sites greater than one half-acre in size, the Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Health Department. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. Interior-only tenant improvements, even if over one-half acre, that will not produce exterior visible dust are exempt from the site-specific Dust Control Plan requirement. Because the project site is less than one-half acre in size, the proposed project is not subject to the requirement to prepare a Dust Control Plan. However, Improvement Measure I-AQ-1a, if implemented as a condition of project approval, would nonetheless require the preparation of such a plan.

### San Francisco Health Code Provisions Regarding Roadway Generated Pollutants

San Francisco adopted Article 38 of the *San Francisco Health Code* in 2008, requiring that for new residential projects of 10 or more units located in proximity to high-traffic roadways, as mapped by the Department of Public Health, an Air Quality Assessment be prepared to determine whether residents

would be exposed to potentially unhealthful levels of PM25. Because the proposed project would develop office and retail uses, it would not be subject to Article 38.

### Toxic Air Contaminants

In 2005, the ARB approved a regulatory measure to reduce emissions of toxic and criteria pollutants by limiting the idling of new heavy-duty diesel vehicles. The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour.<sup>48</sup> Buses or vehicles also must turn off their engines upon stopping at a school and must not start their engines more than 30 seconds before beginning to depart from a school. Also, state law SB351 (adopted in 2003) prohibits locating public schools within 500 feet of a freeway or busy traffic corridor.

# **Impacts**

# Significance Criteria

The proposed project would have a significant air quality impact if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

As noted in the setting, in 2010, BAAQMD published an update to its CEQA Air Quality Guidelines and adopted new significance thresholds for CEQA analysis. Under the new BAAQMD CEQA Air Quality Guidelines and thresholds,<sup>49</sup> the significance thresholds for criteria pollutant emissions from project operations are as follows: for ROG, NOx and PM2.5, a net increase of 54 pounds per day would be considered significant, while for PM10, a net increase of 82 pounds per day would be considered significant. For CO, an increase would be considered significant if it leads to or contributes to CO concentrations exceeding the State Ambient Air Quality Standard, although quantification would not be required if a project is consistent with the local congestion management program and plans and traffic volumes at affected intersections are below 24,000 vehicles per hour. For construction-period impacts, the

There are 12 exceptions to this requirement (e.g., emergency situations, military, adverse weather conditions, etc.), including: when a vehicle's power takeoff is being used to run pumps, blowers, or other equipment; when a vehicle is stuck in traffic, stopped at a light, or under direction of a police officer; when a vehicle is queuing beyond 100 feet from any restricted area; or when an engine is being tested, serviced, or repaired.

BAAQMD, California Environmental Quality Act (CEQA) Air Quality Guidelines, June 2010; and adopted Thresholds of Significance, June 2010. Available on the internet at: <a href="http://www.baaqmd.gov/Divisions/Planning-and-Research/CEOA-GUIDELINES/Updated-CEQA-Guidelines.aspx">http://www.baaqmd.gov/Divisions/Planning-and-Research/CEOA-GUIDELINES/Updated-CEQA-Guidelines.aspx</a>.

same thresholds apply for ROG, NOx, PM2.5, and PM10, except that the thresholds for PM2.5 and PM10 apply only to exhaust emissions. There are no quantitative thresholds for construction dust emissions; instead, impacts are considered less than significant if best management practices are employed to control dust during construction activities, including demolition and excavation.

For health risks and hazards resulting from emissions of toxic air contaminants, BAAQMD recommends either that a project be found to be in compliance with a "qualified community risk reduction plan," or that significance thresholds be used for both construction and operational emissions based on commonly used standards employed in health risk assessment. The thresholds for project-specific impacts are: an increase in lifetime cancer risk of 10 chances in one million, an increase in the non-cancer risk equivalent to a chronic or acute "Hazard Index" greater than 1.0,50 or an increase in the annual average concentration of PM2.5 in excess of 0.3 micrograms per cubic meter. BAAQMD also recommends cumulative thresholds of 100 in one million cancer risk, a Hazard Index greater than 10.0, and a PM2.5 concentration greater than 0.8 micrograms per cubic meter. Unlike the volume-based thresholds for criteria pollutants noted above, the toxic air contaminant thresholds are used for specific receptor locations when a risk analysis is required for specific project components, such as stationary sources (common in industrial operations) or the use of diesel-powered equipment, including construction equipment.

Project level thresholds of significance set by the BAAQMD reflect the level at which a project's individual emissions would result in a cumulatively considerable contribution to an existing air quality problem; therefore, if project impacts identified are significant, impacts would also be cumulatively considerable. As stated in the CEQA Air Quality Guidelines:

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.<sup>51</sup>

According to BAAQMD, no further cumulative analysis should be required beyond the analysis of whether a proposed project's impacts would contribute considerably to ambient levels of pollutants or greenhouse gases, 52 with the exception of the above-noted cumulative risk and hazard analysis for toxic air contaminants.

<sup>50</sup> Hazard Index represents the ratio of expected exposure levels to an acceptable reference exposure levels.

<sup>51</sup> BAAQMD Guidelines (see footnote 49, p. 74); p. 2-1.

<sup>52</sup> Ibid.

# Methodology

The above-noted quantitative significance thresholds also apply to long-term operational impacts of the proposed project. Construction exhaust emissions and operational emissions of criteria air pollutants were estimated using the URBan EMISsions (URBEMIS) 2007 model (version 9.2.4) for the expected project buildout and compared to BAAQMD significance thresholds. The model combines information on trip generation with vehicular emissions data specific to different types of trips in the San Francisco area (home-to-work, work-other, etc.) from the ARB's EMFAC 2007 BURDEN model to create an estimated daily emissions burden for travel within the San Francisco Bay Area Air Basin. The resulting quantification is compared against the BAAQMD's recommended thresholds.

For the health risk assessment related to use of diesel-powered construction equipment, the BAAQMD has prepared "screening tables" that allow a project to be found to have a less-than-significant impact if construction activities would occur at least 100 meters (330 feet), in most cases, from sensitive receptors. Because many projects in urban areas, including the proposed 350 Mission Street project, would be closer than this to sensitive receptors, a quantitative risk evaluation is conducted that involves dispersion modeling, using the Industrial Source Complex Short-Term (ISC3ST) model, accounting for the construction equipment to be used, local meteorology, and nearby sensitive receptors, to determine whether the BAAQMD thresholds would be exceeded at any receptor location. For cancer risk and Hazard Index calculations, further computation is undertaken to convert the model's pollutant concentration outputs to risk numbers.

# **Impact Analysis**

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction, the project would affect local particulate concentrations primarily due to fugitive dust sources, as well as construction equipment exhaust. Over the long term, the project would result in an increase in emissions primarily due to increased motor vehicle trips. On-site stationary sources (such as natural gas boilers for water and space heating) and area sources (such as landscaping and use of consumer products) would result in lesser quantities of pollutant emissions.

#### **Odors**

The proposed project would include office and restaurant/retail uses not typically associated with noxious odors. Although restaurant space could include one or more ventilation fans, the nearest sensitive receptors are nearly 200 feet from the proposed restaurant/retail space. Therefore, the project would not create objectionable odors affecting a substantial number of people, and odors are not discussed further in this section.

## **Construction Air Quality Impacts**

Impact AQ-1: Project construction could expose sensitive receptors to substantial pollutant concentrations. (Significant and Unavoidable)

Demolition, grading and new construction activities would temporarily affect local air quality during the project's proposed 22-month construction schedule, causing temporary increases in particulate dust and other pollutants. Emissions generated from construction activities include dust (including PM10 and PM2.5)<sup>53</sup> primarily from "fugitive" sources, combustion emissions of criteria air pollutants (reactive organic gases [ROG], nitrogen oxides [NOx], carbon monoxide [CO], sulfur oxides [SOx], and PM10 and PM2.5) primarily from operation of construction equipment and worker vehicles, and evaporative emissions (ROG) from asphalt paving and architectural coating applications.

### **Fugitive Dust Emissions**

For fugitive dust, the BAAQMD recommends a "best management practices" approach for dust control. Project-related demolition, excavation, grading and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Although there are federal standards for air pollutants and implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. According to the California Air Resources Board, reducing ambient particulate matter from 1998 – 2000 levels to natural background concentrations in San Francisco would prevent over 200 premature deaths.

Dust can be an irritant causing watering eyes or irritation to the lungs, nose and throat. Demolition, excavation, grading and other construction activities can cause wind-blown dust to add to particulate matter in the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

In response, as noted under Regulatory Setting, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

At approximately 19,000 square feet, the proposed 350 Mission Street project site is smaller than one-half acre, and is therefore not subject to the Dust Control Plan requirement. However, to ensure that construction-related dust impacts are minimized, Improvement Measure I-AQ-1a would impose, as a

Particles that are 10 microns or less in diameter and 2.5 microns or less in diameter, respectively.

condition of approval, a requirement to prepare a Dust Control Plan as called for in the Construction Dust Control Ordinance. This would be consistent with the BAAQMD CEQA Air Quality Guidelines' recommendation that all construction projects employ basic emissions control measures, including watering all exposed surfaces (e.g., staging areas, soil piles, graded areas) twice daily; covering all haul trucks transporting loose material; daily wet street sweeping of visible mud or dirt onto adjacent public streets; minimizing the time that soils are uncovered; and posting contact information for dust complaints.

### Improvement Measure

I-AQ-1a

Dust Control Plan: To reduce construction-related dust emissions, the project sponsor shall incorporate into construction specifications the requirement for development and implementation of a site-specific Dust Control Plan as set forth in Article 22B of the San Francisco Health Code. The Dust Control Plan shall require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and secure soils with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and sweep adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with dust control requirements.

The regulations and procedures set forth by the *San Francisco Building Code* and *San Francisco Health Code*, along with Improvement Measure I-AQ-1a, would ensure that potential dust-related air quality impacts would be reduced to a level of insignificance.

### Construction Exhaust Emissions—Inventory

Criteria pollutant emissions of ROG, NOx, PM<sub>10</sub>, and PM<sub>2.5</sub> from construction equipment would incrementally add to the regional atmospheric loading of these pollutants during project construction. The BAAQMD CEQA Air Quality Guidelines recommend the quantification of project related exhaust emissions and comparison of the emissions to its new significance thresholds. Therefore, daily project

TABLE 5
PROJECT CONSTRUCTION EXHAUST EMISSIONS ESTIMATES

Construction Phase and Year	Estimated Daily Emissions (pounds per day)					
	ROG	NOx	PM10	PM2.5		
2011	10.7	25.1	14.1	13.7		
2012	21.4	9.8	0.5	0.4		
BAAQMD Threshold	54	54	82	54		
Significant?	No	No	No	No		

NOTE: Project construction emissions estimates are weighted daily averages based on lengths of construction phases, based on output from URBEMIS 2007 v.9.2.4. Equipment numbers and types are based on the Applicant's guidance and experience of the consultant.

SOURCE: Environmental Science Associates, 2010

construction exhaust emissions that would be associated with the proposed project have been estimated and are presented in **Table 5**.

As indicated in Table 5, emissions from project construction would not exceed the BAAQMD's significance thresholds. It should also be noted that the URBEMIS model does not account for new BAAQMD architectural coatings regulations (BAAQMD Regulation 8, Rule 3) that will go into effect on January 1, 2011. The new regulation will put additional limits on the amount of VOCs and ROG that would be allowed in architectural coatings, which the BAAQMD estimates will result in approximately a 32 percent reduction in VOC/ROG emissions in the Air Basin.<sup>54</sup> Therefore, actual daily ROG emissions that would be associated with the project would be less than those presented in Table 5.

Although construction-related emissions would not exceed the BAAQMD's significance thresholds for criteria pollutants, Implementation of Improvement Measure I-AQ-1b would further reduce the less-than-significant emissions from construction vehicles, and would be consistent with the BAAQMD's basic emissions control measures for all projects.

#### Improvement Measure

- I-AQ-1b Construction Vehicle Emissions Minimization: To reduce construction vehicle emissions, the project sponsor shall incorporate the following into construction specifications:
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of

<sup>54</sup> BAAQMD, "Staff Report, BAAQMD Regulation 8, Rule 3: Architectural Coatings." May 2009; p. 4. Available on the internet at:

http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Public%20Hearings/2009/0803 July09 public hearing/0803 stfrpt 052109.ashx.

Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

• All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

#### Construction Exhaust Emissions—Health Risk

To determine if construction emissions could result in adverse health effects at nearby receptors, a health risk assessment and PM<sub>2.5</sub> analyses were conducted.<sup>55</sup> The analyses calculated mass emissions of PM<sub>10</sub>, which was used as a surrogate for diesel particulate matter, and PM<sub>2.5</sub> exhaust from on-site heavy-duty construction equipment.<sup>56</sup> The estimated mass emissions were entered into the Industrial Source Complex Short-term (ISC3ST) dispersion model to estimate ambient concentrations of PM10 (diesel particulate matter) and PM<sub>2.5</sub> associated with the project's construction activities. As recommended by BAAQMD, concentrations of the toxic air contaminant Acrolein were also estimated, because this chemical has the greatest non-cancer health risks for toxic air contaminants contained in diesel exhaust.

The analysis determined that the proposed project's construction-related emissions would generate a cancer risk of 4 in one million for adult receptors and 74 in one million for child (infant) receptors at the nearest residential building, the Millennium tower across Mission Street from the proposed project.<sup>57</sup> At the child care center at the PG&E Building at 77 Beale Street, the analysis identified an incremental lifetime cancer risk of 127 in one million as a result of project construction. The risk to workers at the child care center was estimated at 21 in one million. Each of these values, other than the adult resident, exceeds the BAAQMD significance threshold of 10 in one million, and the impact would therefore be significant.<sup>58</sup>

The maximum concentration of PM<sub>2.5</sub> at any of the sensitive receptors associated with the project's construction activities would reach an annual average of 1.8 micrograms per cubic meter.<sup>59</sup> This would exceed the significance threshold of 0.3 micrograms per cubic meter, and would also be significant.

ENVIRON International, "Quantitative Analysis of Construction Emissions and Health Impacts for the 350 Mission Street Project," August 12, 2010. This document is included in Appendix B.

Diesel-powered construction equipment was assumed to be used during demolition of the existing building and during excavation, as well as during concrete pouring for the structure (concrete pump and mixer trucks.)

For the child receptor, recommended BAAQMD assumptions concerning infants (up to two years of age) were used for purposes of a conservative analysis. These assumptions include a ten-fold "age sensitivity factor" that accounts for infants' greater sensitivity to toxic pollutants. The residential receptor are located on the third story of the adjacent tower as commercial uses occupy the first two stories.

According to BAAQMD, the estimated lifetime cancer risk from all toxic air contaminants in the Bay Area is approximately 400 in one million, while the total lifetime cancer risk for all causes is approximately 400,000 in one million (BAAQMD, *Draft Bay Area 2010 Clean Air Plan*, March 2010; p. 1-17 (<a href="http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx">http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx</a>.) Reviewed September 2, 2010.

Unlike cancer risk, which is adjusted based on individual (infant vs. adult, for example), the concentration of PM2.5 is a single value at each location.

The Hazard Indices associated with exposure to the toxic air contaminant Acrolein would be less than 1 (0.4 Chronic Hazard Index and 0.1 Acute Hazard Index), and would be less than significant.

It is noted that the foregoing discussion does not represent an impact unique to the proposed 350 Mission Street project. Rather, as noted, the assessment of construction emission health risk is part of the BAAQMD's newly promulgated CEQA guidance, and the resulting impacts, while not heretofore commonly reported, would be similar for any comparably sized construction project in a densely developed area that contains a mix of land uses. Indeed, the BAAQMD has published a guide for a screening-level analysis of construction health risk that finds a significant impact due to construction emissions for virtually any project, other than a residential project of five or fewer units, that is within 100 meters (330 feet) of a sensitive receptor. BAAQMD notes that its screening methodology incorporates "many worst-case and conservative assumptions," and states that a project-specific health risk assessment would likely produce more accurate results. Nevertheless, it is clear that the new BAAQMD CEQA guidance leads to a determination of at least a potential significant impact for construction of many potential projects in San Francisco and other densely developed Bay Area communities. (It is noted that a typical South-of-Market block west of First Street measures 825 by 550 feet—the project block is 275 by 550 feet— while a typical North-of-Market block measures 412.5 by 275 feet.)

As stated above, a project-specific health risk analysis was prepared for the proposed project. It, too, however, includes a number of conservative assumptions. For example, for exposure of children at the PG&E building child care center, the analysis assumes exposure for 10 hours per day, meaning that children are present and exposed to ambient outdoor air for 10 hours per day. In reality, children may spend perhaps half the day indoors.<sup>61</sup> Depending on the source of the air inside the building—the 77 Beale Street building has fixed windows at all levels, meaning the building has a forced-air ventilation system—indoor air could be substantially cleaner. However, without detailed knowledge of the building or the operation of the child care center, the project health risk assessment defaulted to more conservative exposure assumptions. Additionally, the modeling relied upon the model's own default meteorological (weather) data, rather than assumptions about wind and other weather conditions specific to San Francisco, and assumed "rural" rather than "urban" terrain, both of which further add to the conservative nature of the results. This is because, in the case of meteorology, the default assumptions to not account for San Francisco's prevailing westerly winds and, in the case of the terrain, do not account for "mixing" of pollutants caused by the effect of tall buildings nearby.

BAAQMD, "Screening Tables for Air Toxics Evaluation During Construction," May 2010. On the internet at: <a href="http://www.baaqmd.gov/Home/Divisions/Planning%20and%20Research/CEQA%20GUIDELINES/Tools%20and%20Methodology.aspx">http://www.baaqmd.gov/Home/Divisions/Planning%20and%20Research/CEQA%20GUIDELINES/Tools%20and%20Methodology.aspx</a>. Reviewed September 1, 2010.

The State of California requires that child care centers have outdoor play space, and that this space be "open to air and light," which the Child Care Licensing Division of the state Department of Social Services generally interprets as meaning that the outdoor space must be open to the sky (Mardi Lucich, Citywide Childcare Administrator, San Francisco Department of Children, Youth, and Their Families; personal communication, August 24, 2010). It is not known if physical enclosure of the outdoor play area would be acceptable under these regulations.)

The health risk assessment determined that both cancer risk and concentration of PM2.5 could be reduced to a less-than-significant level at all receptor locations (that is, the greatest risk and the greatest concentration would both be less than the newly adopted BAAQMD thresholds) if all diesel construction equipment were to meet the California Air Resources Board (ARB) and U.S. Environmental Protection Agency (EPA) Interim Tier 4 standards for Off-Road Compression-Ignition (Diesel) Engines. The interim Tier 4 emissions standards are about 90 percent more restrictive than current emissions standards for offroad engines. As a result, use of engines that meet the interim Tier 4 standards would reduce diesel exhaust emissions by approximately 90 percent, and would result in a cancer risk that would not exceed 10 chances in one million at any of the nearby sensitive receptors. For child (infant) receptors at the Millennium tower, the lifetime cancer risk would be 6 in one million, compared to 74 in one million in the unmitigated condition. For an adult receptor at the Millennium tower, the risk would decrease to less than 1 in one million, from 4 in one million without mitigation. For an infant at the child care center, the risk would decrease to 10 in one million, from an unmitigated risk of 127 in one million. The child care center worker risk would decrease to 2 in one million from 21 in one million. Use of Tier 4 diesel equipment would also reduce the PM2.5 concentration at all receptors to 0.13 micrograms per cubic meter, which is less than the significance threshold of 0.3 micrograms per cubic meter.

However, Tier 4 equipment is not readily available at this time. Both federal (U.S. EPA) and CARB Interim Tier 4 standards take effect in 2011 for new equipment. Meanwhile, ARB, which in 2007 had adopted new standards for existing ('in-use") diesel construction (and other off-road) equipment, in February 2010 delayed implementation of some of the new standards, including requirements that construction equipment use so-called Best Available Control Technology or the each operator's fleet of equipment meet a specified average emissions standard. According to CARB, implementation of the regulation was suspended because of "the continuing effects of the economy on industries that use off-road diesel vehicles, in particular the construction industry, and because ARB currently lacks authorization from the United States Environmental Protection Agency to enforce certain aspects of the regulation." ARB staff is not proposing further revisions to diesel regulations until at least December 2010.<sup>62</sup> Other potential mitigation measure is identified below.

#### Mitigation Measure

- M-AQ-1 Construction Vehicle Emissions Minimization: To reduce the potential health risk resulting from project construction activities, the project sponsor shall include in contract specifications a requirement for the following BAAQMD-recommended measures:
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (less than the five minutes identified above in Improvement Measure I-AQ-1b);
  - The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and

California Air Resources Board (ARB), Regulatory Advisory, "Enforcement of the In-Use Off-Road Diesel Vehicle Regulation," Advisory 10-414, February 2010 (<a href="http://www.arb.ca.gov/enf/advs/advs414.pdf">http://www.arb.ca.gov/enf/advs/advs414.pdf</a>); ARB, In-"Use Off-Road Diesel Vehicle Regulation" webpage (<a href="http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm">http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm</a>). Reviewed September 2, 2010.

subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include, as the primary option, use of Interim Tier 4 equipment where such equipment is available and feasible for use, the use of other late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available;

- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM, including Tier 3 or alternative fuel engines where such equipment is available and feasible for use:
- All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and
- The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available.

Significance After Mitigation: Implementation of the above measures would result in the maximum feasible reduction of diesel emissions that would contribute to construction-period health risk, thereby lowering both lifetime cancer risk and the concentration of PM25 to which receptors would be exposed. Furthermore, the above analysis indicates that use of interim Tier 4 diesel construction equipment would reduce the health risk to a level that would not exceed any of the significance thresholds identified by the BAAQMD. It is also noted that construction emissions could be lower if newer equipment is employed or less powerful or smaller diesel equipment is used than assumed in the analysis. Emissions could also be higher if more or larger diesel equipment is used. Depending on the regulations in place at the time construction begins, and depending on the precise mix of diesel-powered construction equipment employed, it is possible that the impact would be reduced to a less-than-significant level. However, because it cannot be stated with certainty that either cancer risk or PM2.5 concentration would be reduced to below the BAAQMD-recommended significance thresholds, and because of the uncertainty concerning construction equipment, this impact is conservatively judged to be significant and unavoidable.

Cumulative construction impacts would occur from other projects in the vicinity, most notably including the new Transit Terminal across Mission Street from the project site. There are several other projects for which the Planning Department has applications on file in proximity to the 350 Mission Street site. These include high-rise projects at the northwest corner of First and Mission Streets, on Fremont Street south of the new Transit Center site, and on Tehama Street between First and Second Streets. Other potential projects identified in the analysis for the Transit Center District Plan include towers on Mission Street between First and Second Street (Golden Gate University site) and on the north side of Howard Street between First and Second Streets. Each of these projects would result in emissions of diesel particulate matter and other PM2.5. Projects more than 100 meters (330 feet) from the sensitive receptors that would be affected by construction of the 350 Mission Street project would contribute substantially less to health risks at these receptors; likewise, the 350 Mission Street project would make little contribution to health risks at receptors more than 330 feet distant. However, given the proximity of the new Transit Center to the 350 Mission Street project site, there is the potential that cumulative construction emissions would exceed the BAAQMD's significance criteria for cumulative impacts, which are 100 in one million cancer risk non-cancer hazard index of 10, and a PM25 concentration of 0.8 micrograms per cubic meter. Implementation by the Transit Center (and other nearby projects) of controls comparable to those identified in Mitigation Measure M-AQ-1 for the proposed 350 Mission Street project would likewise result in the maximum feasible reduction of construction emissions and health risk for these other projects. However, as with the proposed project, because it cannot be stated with certainty that either

TABLE 6
ESTIMATED DAILY REGIONAL EMISSIONS (2013)

	Projected Emissions (Pounds per Day) <sup>1,2</sup>							
	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>				
Project Area-Source Emissions	2.4	2.4	0.01	0.01				
Project Mobile-Source (Vehicle) Emissions	7.3	5.2	10.5	2.0				
TOTAL	9.7	7.7	10.51	2.01				
BAAQMD Threshold	54	54	82	54				

#### NOTES:

SOURCE: Environmental Science Associates, 2010.

cancer risk or PM<sub>2.5</sub> concentration would be reduced to below the BAAQMD-recommended significance thresholds, the cumulative impact is likewise conservatively judged to be significant and unavoidable.

## **Operational Air Quality Impacts**

Impact AQ-2: Project operation would not conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to regional pollutants, either individually or cumulatively. (Less than Significant)

Based on the project transportation analysis,<sup>63</sup> the proposed project would generate a net increase of approximately 800 vehicle trips per day. Operational emissions from project traffic and from operation of the proposed building were calculated using the URBEMIS 2007 (version 9.2.4) model, and are presented in **Table 6**. As shown in Table 6, emission increases attributable to the proposed project would be substantially below the significance thresholds established by the BAAQMD. Therefore, the project's effects of regional criteria pollutant emissions would be less than significant.

The proposed project would be generally consistent with the San Francisco General Plan. Additionally, the General Plan, Planning Code, and City Charter implement various Transportation Control Measures identified in the 2005 Ozone Strategy and the draft 2010 Bay Area Clean Air Plan through the City's Transit First Program, bicycle parking requirements, transit development impact fees applicable to commercial uses, and other actions. In light of the above, the project would not contribute considerably to cumulative air quality impacts, nor would it interfere with implementation of the 2005 Ozone Strategy or the 2001 Ozone Attainment Plan, which are the applicable regional air quality plans developed to improve air

Emission factors were generated by the URBEMIS 2007 (v. 9.2.4) model for San Francisco County, and assume a default vehicle mix. All daily estimates are the average of summer and winter conditions.

<sup>&</sup>lt;sup>2</sup> Columns may not total due to rounding.

<sup>63</sup> AECOM, 350 Mission Street Office Building Transportation Report (see footnote 18, p. 39).

quality and to effectively meet the state and federal ambient air quality standards, respectively, nor would it interfere with implementation of the draft 2010 Bay Area Clean Air Plan.

## Local Air Quality Impacts

Impact AQ-3: Traffic from project operation would not generate emissions that would conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to local pollutants, either individually or cumulatively. (Less than Significant)

#### Carbon Monoxide

The San Francisco Bay Area Air Basin is designated as "attainment" for carbon monoxide (CO). As stated in the 2010 update of the BAAQMD *CEQA Air Quality Guidelines*, "Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area Air Basin with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991."<sup>64</sup> Accordingly, as noted in the Significance Criteria, BAAQMD states that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan and would not increase traffic volumes at local intersections to more than 24,000 vehicles per hour, for locations, such as the project site, in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. The project would be consistent with applicable congestion management planning, and the greatest volume at any of the study intersections is less than 3,500 vehicles per hour. Therefore, effects related to CO concentrations would be less than significant.

#### Diesel Particulate Matter Exposure, PM<sub>2.5</sub>, and Health Effects

As noted in the setting, diesel particulate matter (DPM) is a toxic air contaminant and the ARB recommends that proximity to sources of DPM emissions be considered in the siting of new development. Among other things, ARB advises that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day. As noted in the Setting, Article 38 of the *San Francisco Health Code* requires air quality modeling for new residential projects of 10 or more units located in proximity to high-traffic roadways. The proposed project would not include any such sensitive land uses, and because the proposed project would develop office and restaurant/retail uses, which are not considered sensitive receptors, the project would not be subject to Article 38, and the project would not result in adverse effects with regard to generating increased exposure of sensitive receptors to DPM or PM<sub>2.5</sub>.

In terms of the effect of project traffic on existing sensitive receptors, as noted in the discussion of Sensitive Receptors, p. 68, the nearest residential building is the Millennium tower, located to the south across Mission Street, and the nearest licensed child care center is at the PG&E building, at 77 Beale Street, with an outdoor play area on Mission Street at Main Street, one block east of the project site. Fremont, Mission, and Beale Streets have all been identified by the San Francisco Department of Public

<sup>64</sup> BAAQMD CEQA Air Quality Guidelines (see footnote 49, p. 74); p. 6-1.

Health as having traffic volumes that place them within "Potential Roadway Exposure Zones"; these zones are areas that, due to proximity to freeways and major roadways, may be subject to relatively high concentrations of PM<sub>2.5</sub> from local traffic.<sup>65</sup> (These are the locations at which new residential projects are subject to Article 38.) Based on the traffic analysis for the proposed project, project-generated traffic would add 44 cars, or approximately 1 percent of the combined existing traffic volumes in the a.m. and p.m. peak hours at the intersection of Fremont and Mission Streets. Assuming that each peak hour represents approximately 10 percent of daily traffic, the estimated 220 daily project-generated vehicles traveling on Fremont and Mission Streets would not adversely affect air quality at the Millennium tower, because 220 daily vehicles would not generate a sufficient volume of PM2.5 or other pollutants to result in an unhealthful concentration in the ambient air. Likewise, assuming a comparable 1-percent 24-hour contribution to traffic on these two streets, the proposed project would not make a considerable contribution to air quality effects because the estimated 220 daily vehicles would not substantially affect the existing or future ambient concentration of PM2.5. Also according to the project traffic analysis, no project-generated traffic would travel on Main Street, or on Mission Street at Main Street. Therefore, any effect on the child care center at the PG&E building due to project-generated traffic would be sufficiently attenuated by distance (i.e., the closest project vehicles would be one block away) so as to not result in a significant effect, either individually or cumulatively, on ambient the concentration of PM2.5.

Similar to the requirements of Article 38, the BAAQMD 2010 CEQA Air Quality Guidelines also recommend analysis of "local community risk and hazard impacts"; that is, assessment of effects related to toxic air contaminants (TACs) both from placement of a new sensitive receptor (for example, a residential project) proximate to source(s) of TACs, and from siting of a new source of TACs. As stated above, the proposed project would not include any such sensitive land uses, and therefore would not expose new sensitive receptors to substantial concentrations of TACs, nor would the project generate sufficient traffic to newly expose existing sensitive receptors to substantial concentrations of TACs. Therefore, this impact would be less than significant. New stationary source(s) of TACs are discussed in the following impact.

Impact AQ-4: Emissions from the proposed project's emergency generator would not conflict with air quality plans, violate air quality standards, or expose sensitive receptors to substantial pollutant concentrations with respect to local pollutants, either individually or cumulatively. (Less than Significant)

The proposed project would include a diesel-powered standby generator to provide emergency electricity to the building in the event of a power outage. Consistent with BAAQMD permit requirements, the standby generator would be limited to 50 hours per year of operations for maintenance and reliability testing. BAAQMD would conduct a screening-level health risk assessment prior to granting a permit for the generator and would not issue the permit if the generator would result in a cancer risk greater than 10 chances in one million. As noted above, this is also the BAAQMD's project-specific significance

A map of "Potential Roadway Exposure Zones" is included in the recently published EIR for the San Francisco General Plan Housing Element, available as FigureV.H-1 in the DEIR Air Quality section, on the internet at: <a href="http://www.sf-planning.org/ftp/files/MEA/2007.1275E">http://www.sf-planning.org/ftp/files/MEA/2007.1275E</a> SFHE DEIR SectionV.H.pdf, at p. V.H-45.

threshold for toxic air contaminants. Because of this permit requirement, the standby generator would not result in adverse health effects. Nevertheless, a screening-level risk assessment was conducted for the proposed generator, and is included in Appendix B. The results indicated that the cancer risk due to the generator would be 0.97 in one million, or well below the threshold of 10 in one million. Non-cancer risk, as indicated by a Hazard Index of 0.0004, would also be well below the threshold of 1.0, and would be less than significant. The maximum concentration of PM2.5, at 0.0018 micrograms per cubic meter, would be below the threshold of 0.2 micrograms per cubic meter, and would be less than significant, as well. Based on these results, the project's contribution to any potential cumulative impact, on receptors that would also be affected by project generator emissions, would not be considerable. Therefore, project effects related to new sources of toxic air contaminants would be less than significant, both individually and cumulatively.

# D. Greenhouse Gas Emissions

# Setting

#### **Greenhouse Gases**

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as a driving force for global climate change. The primary GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor.

While the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide are largely emitted from human activities, accelerating the rate at which these compounds occur within the earth's atmosphere. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Emissions of GHGs are typically reported in "carbon dioxide-equivalent" (CO<sub>2</sub>E) measures.<sup>66</sup>

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.<sup>67</sup> Secondary effects are likely to include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

The California Air Resources Board (ARB) estimated that in 2006 California produced about 484 million gross metric tons (MMTCO<sub>2</sub>E; about 535 million U.S. tons) of CO<sub>2</sub>E GHG emissions.<sup>68</sup> The ARB found that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 22 percent and industrial sources at 20 percent. Commercial and residential fuel use (primarily for heating) accounted for 9 percent of GHG emissions.<sup>69</sup> In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial/ commercial sector were the two largest sources of GHG emissions, each accounting for about 36 percent of the Bay Area's 95.8 MMTCO<sub>2</sub>E (105.4 million U.S.

Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

California Air Resources Board, Climate Change website (<a href="http://www.arb.ca.gov/cc/ccei/meetings/120106workshop/intropres12106.pdf">http://www.arb.ca.gov/cc/ccei/meetings/120106workshop/intropres12106.pdf</a>). Accessed January 22, 2010.

The abbreviation for "million metric tons" is MMT; thus, "million metric tons of CO2 equivalents is written as MMTCO<sub>2</sub>E.

<sup>69</sup> California Air Resources Board, "California Greenhouse Gas Inventory for 2000-2006— by Category as Defined in the Scoping Plan." <a href="http://www.arb.ca.gov/cc/inventory/data/tables/ghg">http://www.arb.ca.gov/cc/inventory/data/tables/ghg</a> inventory scopingplan 2009-03-13.pdf. Reviewed October 18, 2009.

tons) of GHG emissions in 2007. Industrial and commercial sources (including office and retail uses) were the second largest contributors of GHG emissions with about 34 percent of total emissions. Electricity production accounts approximately 16 percent of the Bay Area's GHG emissions, followed by residential fuel usage (e.g., home water heaters, furnaces, etc.) at 7 percent, off-road equipment at 3 percent, and agriculture at 12 percent. Among industrial sources, oil refining currently accounts for more than 40 percent of GHG emissions, or approximately 15 percent of the total Bay Area GHG emissions.<sup>70</sup>

California has taken a leadership role in addressing the trend of increasing GHG emissions, with the passage in 2006 of California Assembly Bill 32 (AB 32), the Global Warming Solutions Act. This legislation is discussed below, under Regulatory Setting.

# **Regulatory Environment**

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#### **Federal Actions**

Currently, there is no federal legislation requiring reductions in GHG emissions. Rather, the United States Environmental Protection Agency (EPA) administers a variety of voluntary programs and partnerships with GHG emitters in which the EPA partners with industries producing and utilizing synthetic GHGs to reduce emissions of particularly potent GHGs. There are federal actions requiring increasing automobile efficiency, an endangerment finding for CO<sub>2</sub>, and a recently finalized regulation requiring large sources of GHG emissions to report their emissions to the EPA. In addition, there are several bills pending in Congress that are attempting to regulate GHG emissions in the United States; most of these bills require a cap and trade program in which GHG emissions would be reduced overall through a market-driven approach.

In December 2009, in response to a U.S. Supreme Court ruling, the EPA made a finding under the Clean Air Act that current and projected atmospheric concentrations of the six generally recognized GHGs—CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—"threaten the public health and welfare of current and future generations," and that emissions of these gases from new cars and trucks "contribute to the greenhouse gas pollution which threatens public health and welfare."<sup>71</sup> While not in itself imposing any regulatory requirements, this "endangerment finding" under the Clean Air Act was required before EPA could issue regulations, and allowed the agency to adopt GHG emissions standards that it proposed in September 2009, in conjunction with new fuel economy standards simultaneously proposed by the National Highway Traffic Safety Administration of U.S. Department of Transportation. The standards, published in the Federal Register on May 7, 2010, and effective 60 days thereafter, on July 6, 2010, apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016, and require automakers to improve fleetwide fuel economy and reduce fleet-wide greenhouse gas emissions by approximately five percent each

BAAQMD, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007, December 2008. Available on the internet at: <a href="http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Emission%20Inventory/regionalinventory">http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Emission%20Inventory/regionalinventory</a>

<sup>&</sup>lt;sup>71</sup> EPA website: <a href="http://www.epa.gov/climatechange/endangerment.html">http://www.epa.gov/climatechange/endangerment.html</a>. Reviewed January 8, 2010.

year. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO<sub>2</sub>) per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg) if the automotive industry were to meet this CO<sub>2</sub> level entirely through fuel economy improvements.<sup>72</sup>

In a related action, in June 2009, EPA granted California a waiver under the federal Clean Air Act, allowing the state to impose its own, stricter GHG regulations for vehicles beginning in 2009 (see below).

#### **Statewide Actions**

As early as 2002, with the passage of Assembly Bill 1493, the California legislature directed ARB to adopt regulations to reduce greenhouse gas (GHG) emissions from cars and light trucks beginning in 2009. Because the so-called Pavley standards (named for the bill's author, current state Senator Fran Pavley) would impose stricter standards than those under the federal Clean Air Act, California applied to the EPA for a waiver under the Clean Air Act; this waiver was denied by the Bush Administration in 2008. As noted above, in 2009, EPA granted the waiver. California has now agreed to cooperate with the federal GHG and Corporate Average Fuel Economy standards under development so that there will be a single national standard.

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.<sup>73</sup>

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires the California Air Resources Board (ARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

AB 32 establishes a timetable for the ARB to adopt emission limits, rules, and regulations designed to achieve the intent of the Act. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business as usual emissions levels, or about 10 percent from today's levels. On December 11, 2008, ARB approved a Scoping Plan to meet the 2020 GHG reduction limits outlined in AB 32. The Scoping Plan estimates a reduction of 174 million metric tons (about 191 million U.S. tons) of CO<sub>2</sub>E. Approximately one-third of the emissions reductions strategies fall within the transportation sector and include the following: California Light-Duty Vehicle GHG standards, the Low

National Highway Traffic Safety Administration, "NHTSA and EPA Establish New National Program to Improve Fuel Economy and Reduce Greenhouse Gas Emissions and for Passenger Cars and Light Trucks," fact sheet, May 2010. Available on the internet at: <a href="http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/CAFE-GHG-Fact\_Sheet.pdf">http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/CAFE-GHG-Fact\_Sheet.pdf</a>. Reviewed June 12, 2010.

California Air Resources Board, Climate Change Scoping Plan: A Framework for Change, December 2008. Available on the internet at: <a href="http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm">http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm</a>. Accessed November 3, 2009.

Carbon Fuel Standard, Heavy-Duty Vehicle GHG emission reductions and energy efficiency, and medium and heavy-duty vehicle hybridization, high speed rail, and efficiency improvements in goods movement. These measures are expected to reduce GHG emissions by 57.3 million metric tons (63 million U.S. tons) of CO<sub>2</sub>E. Emissions from the electricity sector are expected to reduce another 49.7 million metric tons (55 million U.S. tons) of CO<sub>2</sub>E. Reductions from the electricity sector include building and appliance energy efficiency and conservation, increased combined heat and power, solar water heating (AB 1470), the renewable energy portfolio standard (33 percent renewable energy by 2020), and the existing million solar roofs program. Other reductions are expected from industrial sources, agriculture, forestry, recycling and waste, water, and emissions reductions from cap-and-trade programs. Regional GHG targets are also expected to yield a reduction of 5 million metric tons (5.5 million U.S. tons) of CO<sub>2</sub>E.<sup>74</sup> Measures that could become effective during project implementation pertain to constructionrelated equipment and building and appliance energy efficiency. Some proposed measures will require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act (NEPA). Some applicable measures that are ultimately adopted will become effective during construction and operation of the proposed project and the proposed project would be subject to these requirements.

Most of the Scoping Plan's GHG reduction measures (excepting those for Agriculture, Forestry, and Industry, which would not be applicable to the proposed project) are set forth in Table 7. While ARB has identified a GHG reduction target of 15 percent from current levels for actions by local governments themselves, it has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions. However, the Scoping Plan does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. As can be seen in Table 7, many of the measures in the Scoping Plan - such as implementation of increased fuel efficiency for vehicles (the "Pavley" standards), increased efficiency in utility operations, and development of more renewable energy sources—require statewide action by government, industry, or both. Some of the measures are at least partially applicable to development projects, such as increasing energy efficiency in new construction, installation of solar panels on individual building roofs, and a "green building" strategy. The City has already implemented several of these measures that require local government action, such as implementing a Green Building Ordinance, a Zero Waste strategy, a Construction and Demolition Debris Recovery Ordinance, and a solar energy generation subsidy program, to realize meaningful reductions in GHG emissions. (See discussion under Local Actions, below.)

<sup>&</sup>lt;sup>74</sup> Ibid.

TABLE 7 GHG REDUCTION MEASURES IN ARB SCOPING PLAN<sup>1</sup>

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO₂e)
Transportat	ion	
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15.0
T-3 <sup>2</sup>	Regional Transportation-Related Greenhouse Gas Targets	5.0
T-4 Vehicle	Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures.  • Ship Electrification at Ports  • System-Wide Efficiency Improvements	3.5
T-7, 8	Medium- and Heavy-Duty Vehicle Measures  • Aerodynamic Efficiency (Discrete Early Action)  • Hy bridization	1.4
T-9	High Speed Rail	1.0
		62.3
Electricity a	nd Natural Gas	
E-1	Energy Efficiency (32,000 GWh of Reduced Demand)  Increased Utility Energy Efficiency Programs  More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities)  Target of 3000 MW Total Installation by 2020	2.1
CR-1	<ul> <li>Energy Efficiency (800 Million Therms Reduced Consumptions)</li> <li>Utility Energy Efficiency Programs</li> <li>Building and Appliance Standards</li> <li>Additional Efficiency and Conservation Programs</li> </ul>	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
		49.7
Green Build	ings	
GB-1 Gree	n Buildings	26
Recycling a	nd Waste	
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2 Addi	· · · · · · · · · · · · · · · · · · ·	TBD+
RW-3	High Recycling/Zero Waste	TBD†
Water		
W-1	Water Use Efficiency	1.4†
W-2 Water		0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†

SOURCE: ARB, 2008

Table excludes GHG reduction measures for Agriculture, Forestry, and Industry (including high-global warming potential gases). This is not the SB 375 regional target. ARB will establish regional targets for each Metropolitan Planning Organization (MPO) region following the input of the regional targets advisory committee and a consultation process with MPOs and other stakeholders per SB 375. GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

In addition to policy directly guided by AB 32, the legislature in 2008 passed Senate Bill (SB) 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 requires regional transportation plans developed by the state's 18 Metropolitan Planning Organizations (in the Bay Area, the Metropolitan Transportation Commission (MTC)), to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve GHG emission reduction targets set by ARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. MTC's 2013 RTP will be its first plan subject to SB 375.

SB 375 requires ARB to establish regional GHG reduction targets. ARB appointed a 21-member Regional Targets Advisory Committee to recommend factors to be considered and methodologies used in setting the regional goals; this committee provided its recommendations to ARB in September 2009.

In addition, the state establishes energy standards for new construction. First adopted in June and most recently revised in 2008, these standards are part of the California Building Standards Code (Title 24 of the California Code of Regulations). In general, Title 24 standards require the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The state Building Code and other standards for appliances and other consumer products apply throughout California, and they limit GHG emissions in California by reducing energy demand.

#### **Regional Actions**

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county region located in the Bay Area Air Basin. BAAQMD is responsible for attaining and/or maintaining air quality in the Air Basin within federal and State air quality standards. BAAQMD has established a Climate Protection Program with the goal of integrating climate protection activities into the district's existing programs. The BAAQMD provides recommendations for lead agencies to follow in protecting air quality, including reducing GHG emissions, through implementation of CEQA review. Notably, in June 2010, the District adopted revised CEQA Air Quality Guidelines that include quantitative thresholds for determining significance of GHG emissions and provides an extensive list of mitigation measures that can be applied to reduce operational emissions, including of GHGs. The District recommends that local agencies adopt a Greenhouse Reduction Strategy consistent with AB32 goals.

#### **Local Actions**

San Francisco has a history of environmental protection policies and programs aimed at improving the quality of life for San Francisco's residents and reducing impacts on the environment. The following plans, policies and legislation demonstrate San Francisco's continued commitment to environmental protection.

*Transit First Policy.* In 1973, San Francisco instituted the Transit First Policy which added Section 16.102 to the City Charter with the goal of reducing the City's reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit

investments; adopts street capacity and parking policies to discourage increased automobile traffic; and encourages the use of transit, bicycling and walking rather than use of single-occupant vehicles.

San Francisco Sustainability Plan. In July 1997, the Board of Supervisors approved the Sustainability Plan for the City of San Francisco establishing sustainable development as a fundamental goal of municipal public policy.

The Electricity Resource Plan (Revised December 2002). San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for assuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

The Climate Action Plan for San Francisco. In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) committing the City and County of San Francisco to a GHG emissions reduction goal of 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions. The Climate Action Plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent GHG reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions have been implemented or are now in progress.

For example, because transportation-related emissions represent half of citywide (and regional) GHG emissions, the Climate Action Plan calls for shifting travel from private automobiles to transit, bicycling, and walking. As noted above, the City has had a Transit First Policy for more than 35 years. Because reducing the availability and increasing the cost of parking can help reduce driving (assuming that alternative travel means are available), parking has been limited in downtown buildings since the Downtown Plan and accompanying rezoning were approved in 1985 with a limit on the amount of parking in both commercial and residential buildings and no required parking. More recently, the City has eliminated required parking in residential buildings downtown and in Rincon Hill and placed limits on the amount of parking that can be provided, and these parking limitations were subsequently expanded to Neighborhood Commercial-Transit (NCT) use districts, mixed-use districts in the Eastern Neighborhoods, and senior and affordable housing units except in the lowest-density residential use districts. Moreover, both the Better Neighborhoods Program (Market & Octavia, Balboa Park, and Central Waterfront Plans) and the Eastern Neighborhoods Rezoning have added to the areas of the City zoned for reduced parking. And in 2009, the City adopted a new Bicycle Plan that calls for an extensive expansion of bicycle lanes, bike parking, and other facilities in an effort to further encourage bicycle use in San Francisco. In the area of energy, the City in 2008 adopted a Green Building Ordinance and a rebate program to reduce the cost to homeowners and businesses of solar power installations. And in the area of

San Francisco Department of the Environment and San Francisco Public Utilities Commission, Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Emissions, September 2004.

solid waste, the City has implemented a number of programs to reduce GHG generation both by reducing the amount of virgin materials used in manufacturing and curtailing the amount of GHG (methane) generated at landfills. (These programs are described further below.)

San Francisco Municipal Transportation Agency's Zero Emissions 2020 Plan. The SFMTA's Zero Emissions 2020 plan focuses on the purchase of cleaner transit buses including hybrid diesel-electric buses. Under this plan hybrid buses will replace the oldest diesel buses, some dating back to 1988. The hybrid buses emit 95 percent less particulate matter (PM, or soot) than the buses they replace, they produce 40 percent less oxides of nitrogen (NOx), and they reduce GHGs by 30 percent.

*LEED*<sup>®</sup> *Silver for Municipal Buildings.*<sup>76</sup> In 2004, the City amended Chapter 7 of the Environment code, requiring all new municipal construction and major renovation projects to achieve LEED<sup>®</sup> Silver Certification from the US Green Building Council.

*Zero Waste*. In 2004, the City of San Francisco committed to a goal of diverting 75 percent of its waste from landfills by 2010, with the ultimate goal of zero waste by 2020. San Francisco currently recovers 69 percent of discarded material.

Construction and Demolition Debris Recovery Ordinance. In 2006 the City of San Francisco adopted Ordinance No. 27-06, requiring all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material from landfills. This ordinance applies to all construction, demolition and remodeling projects within the City.

Greenhouse Gas Reduction Ordinance. In May 2008, the City of San Francisco adopted an ordinance amending the San Francisco Environment Code to establish City GHG emission targets and departmental action plans, to authorize the Department of the Environment to coordinate efforts to meet these targets, and to make environmental findings. The ordinance establishes the following GHG emission reduction limits for San Francisco and the target dates to achieve them:

- Determine 1990 City GHG emissions by 2008, the baseline level with reference to which target reductions are set;
- Reduce GHG emissions by 25 percent below 1990 levels by 2017;
- Reduce GHG emissions by 40 percent below 1990 levels by 2025; and
- Reduce GHG emissions by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare departmental Climate Action Plans that assess, and report to the Department of the Environment, GHG emissions associated with their department's activities and activities regulated by them, and prepare recommendations to reduce emissions. As part of this, the San Francisco Planning Department is required to: (1) update and amend the City's applicable *General Plan* elements to include the emissions reduction limits set forth in this

The LEED (Leadership in Energy and Environmental Design) rating system is a third-party certification and rating program for building design, construction and operation that helps assess a building's performance in energy and water efficiency, CO<sub>2</sub> emissions, indoor environmental quality, and stewardship of resources.

ordinance and policies to achieve those targets; (2) consider a project's impact on the City's GHG reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the "transit first" policy to encourage a shift to sustainable modes of transportation thereby reducing emissions and helping to achieve the targets set forth by this ordinance.

Go Solar SF. On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched their "GoSolarSF" program to San Francisco's businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents.

City of San Francisco's Green Building Ordinance. On August 4, 2008, Mayor Gavin Newsom signed into law San Francisco's Green Building Ordinance for newly constructed residential and commercial buildings and renovations to existing buildings. The ordinance specifically requires newly constructed commercial buildings over 5,000 square feet (sq. ft.), residential buildings over 75 feet in height, and renovations on buildings over 25,000 sq. ft. to be subject to an unprecedented level of LEED® and green building certifications, which makes San Francisco the city with the most stringent green building requirements in the nation. Cumulative benefits of this ordinance include reducing CO2 emissions by 60,000 tons, saving 220,000 megawatt hours of power, saving 100 million gallons of drinking water, reducing waste and storm water by 90 million gallons of water, reducing construction and demolition waste by 700 million pounds, increasing the valuations of recycled materials by \$200 million, reducing automobile trips by 540,000, and increasing green power generation by 37,000 megawatt hours.<sup>77</sup>

The Green Building Ordinance also continues San Francisco's efforts to reduce the City's greenhouse gas emissions to 20 percent below 1990 levels by the year 2012, a goal outlined in the City's 2004 Climate Action Plan. In addition, by reducing San Francisco's emissions, this ordinance also furthers the State's efforts to reduce greenhouse gas emissions statewide as mandated by the California Global Warming Solutions Act of 2006.

The City has also passed ordinances to reduce waste from retail and commercial operations and to require recycling and composting in residential and commercial buildings. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food service ware and requires biodegradable/compostable or recyclable food service ware by restaurants, retail food vendors, City Departments and City contractors. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires many stores located within the City and County of San Francisco to use compostable plastic, recyclable paper and/or reusable checkout bags. Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash.

The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED® Gold Certification.

<sup>77</sup> These findings are contained within the final Green Building Ordinance, signed by the Mayor August 4, 2008.

The City's *Planning Code* reflects the latest smart growth policies and includes: electric vehicle refueling stations in city parking garages, bicycle storage facilities for commercial and office buildings, and zoning that is supportive of high density mixed-use infill development. The City's more recent area plans, such as Rincon Hill and the Market and Octavia Area Plan, provide transit-oriented development policies. At the same time there is also a community-wide focus on ensuring San Francisco's neighborhoods as "livable" neighborhoods, including the Transit Effectiveness Plan and the Bicycle Plan, all of which promote alternative transportation options. And the *San Francisco Environment Code* (Sec. 421) requires employers of 20 or more to provide employees with transit benefits, such as a Muni Fast Pass, Commuter Check, or similar financial support.

Each of the policies and ordinances discussed above include measures that would decrease the amount of GHGs emitted into the atmosphere and decrease San Francisco's overall contribution to climate change.

The Bay Area Air Quality Management District (BAAQMD), in the 2010 update of its CEQA Air Quality Guidelines, has outlined the features that are required for a GHG Reduction Strategy to be considered consistent with the State's GHG reduction goals as codified through AB 32. Projects that are consistent with such qualified GHG Reduction Strategies can be found to have a less-than-significant impact in terms of GHG emissions and climate change. BAAQMD standards for a qualified GHG Reduction Strategy include a GHG inventory for existing (baseline) and future years (2020 or other forecast year) that includes future emissions under a "business-as-usual" scenario; an adopted GHG reduction goal of (a) 1990 GHG emission levels, (b) 15 percent below baseline (2008 or earlier) emission levels, or (c) a perservice-population emissions rate of 6.6 MMTCO2E, the specified significance criterion in the BAAQMD CEQA Air Quality Guidelines; analysis of anticipated GHG emissions resulting from local and state policies and regulations that may be planned or adopted but not implemented; identification of specific feasible reduction measures to meet the identified target on a project-by-project basis, including quantification of each measure's effectiveness in GHG reduction; and establishment of a monitoring program, including identification of which measures apply to different types of new development projects, a mechanism for reviewing and determining if all applicable mandatory measures are being applied, implementation steps and parties responsible for ensuring implementation of each action and a schedule for implementation, procedures for monitoring and updating the GHG inventory and reduction measures at three- to five-year intervals, and annual review and reporting on the progress of implementation. In addition, a qualified GHG Reduction Strategy must have undergone CEQA review. Because few local agencies have completed all of these steps, BAAQMD recognizes that a local agency can demonstrate equivalency with a qualified GHG Reduction Strategy if its climate change ordinances, policies, and programs are consistent with AB 32 and include requirements or feasible measures to reduce GHG emissions to 1990 levels, 15 percent below 2008 levels, or 6.6 MMTCO<sub>2</sub>E.

Given the City's adopted ordinances, policies, and programs, and the fact that the City's Climate Action Plan calls for a reduction in GHG emissions to 20 percent below 1990 levels by the year 2012, the Climate Action Plan for San Francisco, along with accompanying legislation and policy, is likely to be considered a qualified GHG Reduction Strategy, as defined by the BAAQMD. The City is developing documentation toward this end.

# Project Design Features to Minimize Emissions, Including GHGs

The proposed project would be required to comply with the local ordinances and regulations discussed above, including the Green Building Ordinance and Mandatory Recycling and Composting Ordinance and employer provision of transit benefits to employees, as well as the *Planning Code* limitation on the amount of on-site parking and *Planning Code* requirements for the provision of bicycle parking and showers and lockers; transportation management and transportation brokerage services; and planting of street trees; as well as transit development impact fees under Article 38 of the *Administrative Code*. In addition, as noted in the Project Description, the project is proposed for LEED Gold (Version 2.2) certification, which would reduce energy consumption and water use (and thereby reduce emissions from electricity production and consumption of natural gas for heating) to levels below what would otherwise be used with traditional construction.

# **Impacts**

# Significance Criteria

The proposed project would have a significant air quality impact if it were to:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

# Methodology

Quantification of greenhouse gas (GHG) emissions was conducted using a combination of the URBEMIS 2007 model (version 9.2.4), the BAAQMD Greenhouse Gas Model, and other emissions factors.

Impact GG-1: Project operation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant)

In its new *CEQA Air Quality Guidelines* (May 2010), the BAAQMD recommends that the determination of the significance of a project's contribution to climate change be evaluated by comparing the project to the applicable jurisdiction's Climate Action Plan or equivalent policy framework; where the project is found consistent, the project would have a less-than-significant impact. In the absence of such a conclusion, the BAAQMD recommends a quantitative threshold of 1,100 metric tons per year or a "service population" (residents plus employees) threshold of 4.6 metric tons per year per person.<sup>78</sup>

This evaluation relies on the proposed BAAQMD approach to determining significance, and also follows the recently revised State CEQA Guidelines, which provide general direction with regard to analysis of

<sup>&</sup>lt;sup>78</sup> BAAQMD, CEQA Guidelines, June 2010 (see footnote 49, p. 74).

GHG emissions.<sup>79</sup> These revisions include a new section (Sec. 15064.4) specifically addressing the significance of GHG emissions. Section 15064.4 calls for a "good-faith effort" to "describe, calculate or estimate" GHG emissions; Section 15064.4 further states that the significance of GHG impacts should include consideration of the extent to which the project would increase or reduce greenhouse gas emissions; exceed a locally applicable threshold of significance; and comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." The revisions also state that a project may be found to have a less-than-significant impact if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (Sec. 15064(h)(3)).

The calculation presented below includes CO<sub>2</sub>E GHG emissions from the construction period, as well as annual CO<sub>2</sub>E GHG emissions from increased vehicular traffic and energy consumption, including both natural gas and electricity, from electricity used to transport water and treat wastewater, and from solid waste generation.

The proposed project would increase the activity onsite by developing a new 24-story building containing about 356,000 total square feet of office space and 6,600 square feet of restaurant and retail space. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of traffic increases (mobile sources) and residential and commercial operations associated with heating, energy use, water usage and wastewater treatment, and solid waste disposal (area sources). Construction of the proposed project would emit approximately 375 metric tons (412 U.S. tons) of CO<sub>2</sub>E.<sup>80</sup> Direct project CO<sub>2</sub>E emissions (including CO<sub>2</sub>, methane, and nitrous oxide emissions) would include approximately 950 metric tons (1,045 U.S. tons) of CO<sub>2</sub>E/year from transportation and about 400 metric tons (440 U.S. tons) of CO<sub>2</sub>E/year from heating, for a total of about 1,350 metric tons (1,485 U.S. tons) of CO2E/year of project-emitted GHGs. The project would also indirectly result in GHG emissions from offsite electricity generation at power plants (approximately 2,020 metric tons (2,220 U.S. tons) of CO<sub>2</sub>E/year, including electricity associated with water transport and treatment) and about 1,265 metric tons (1,390 U.S. tons)of CO<sub>2</sub>E from anaerobic decomposition at landfills, for a GHG operational emissions total of approximately 4,635 metric tons (about 5,100 U.S. tons of CO<sub>2</sub>E/year. Annual emissions would represent less than one one-hundredth of one percent (0.006 percent) of total Bay Area GHGs emitted in 2007.81 GHG emissions are shown in Table 8.

<sup>79</sup> The California Natural Resources Agency issued a final version of the revised CEQA Guidelines on December 30, 2009. The new Guidelines became effective following review by the state Office of Administrative Law, which approved the revised Guidelines for incorporation by the Secretary of State into the California Code of Regulations in March 2010.

Construction emissions and annual emissions are not intended to be additive as they occur at different points in the project's lifecycle. Construction emissions are one-time emissions that occur prior to building occupancy. Annual emissions are incurred only after construction of the proposed project and are expected to occur annually for the life of the project.

The Bay Area Air Quality Management District reported regional Bay Area GHGs emissions in 2007 at approximately 95.8 million metric tons (105.3 million U.S. tons) CO2E.

TABLE 8
TOTAL CO2-EQUIVALENT EMISSIONS (METRIC TONS/YEAR)1

Transportation	952	
Heating	401	
Water and Wastewater	48	
Electricity Generation	1,971	
Solid Waste <sup>2</sup>	1,264	
Total Operation Emissions (CO₂E)	4,636	
Operational Emissions per Service Population <sup>3</sup>	3.5	
Total Construction Emissions (CO <sub>2</sub> E)	375	

<sup>1</sup> Emissions are unmitigated.

Solid waste emissions conservatively assume 50 percent diversion from landfill.

SOURCE: Environmental Science Associates, 2010

The GHG estimate for this analysis does not include emission reductions from compliance with the City's regulations that would reduce project GHG emissions. Specifically, the proposed project would include the features described in **Table 9**, which would result in a reduction in GHG emissions.

San Francisco has been actively pursuing cleaner energy, transportation and solid waste policies, through a framework of adopted ordinances, policies, and programs that, together with the fact that the City's Climate Action Plan calls for a reduction in GHG emissions to 20 percent below 1990 levels by the year 2012, could likely render the Climate Action Plan for San Francisco a "qualified Climate Action Plan," as defined by the BAAQMD. The proposed project would be consistent with the City's Climate Action Plan because it would be located in proximity to multiple transit lines on Market, Mission, and Fremont Streets, as well as the Transbay Terminal and the planned new Transit Center; would provide bicycle parking and associated facilities, limited parking, and transportation management and transportation brokerage services, as specified in the Planning Code; is proposed to receive LEED® Gold certification; and would comply with the City's Construction and Demolition Debris Recovery Ordinance and Green Building Ordinance. These strategies would all directly or indirectly implement components of the Climate Action Plan. However, because no formal determination has been made as to whether the City's Climate Action Plan meets the BAAQMD definition, project GHG emissions are compared to the BAAQMD's proposed thresholds. As noted in Table 8, project emissions of GHGs would exceed the 1,100 metric tons per year threshold, but would fall below 4.6 metric tons per year per service population. Therefore, the proposed project would not exceed the BAAQMD's proposed significance threshold. This is indicative of the fact that development in San Francisco, with its extensive transit network, limited parking, mix of uses, and proximity of services is, in general, inherently likely to generate a reduced volume of GHG emissions than development of a comparable project elsewhere in the Bay Area, where the foregoing factors are less prevalent or lacking.

As infill development, the proposed project would be constructed in an urban area with good transit access, reducing regional vehicle trips and vehicle miles traveled, and therefore the project's transportation-related GHG emissions would tend to be less relative to the same amount of population

Service population emissions based on total project employment of approximately 1,310.

# TABLE 9 CITY GHG REGULATIONS APPLICABLE TO THE PROPOSED PROJECT

Regulation	Project Requirement
Commuter Benefits Ordinance (Environment Code, Section 421)	Employers in the proposed new building with more than 20 employees in San Francisco would be required to provide at least one of the following programs:  1. A Pre-Tax Election consistent with 26 U.S.C. § 132(f), allowing employees to elect to exclude from taxable wages and compensation, employee commuting costs incurred for transit passes or vanpool charges, or  (2) Employer Paid Benefit whereby the employer supplies a transit pass for the public transit system requested by each Covered Employee or reimbursement for equivalent vanpool charges at least equal in value to the purchase price of the appropriate benefit, or  (3) Employer Provided Transit furnished by the employer at no cost to the employee in a vanpool or bus, or similar multi-passenger vehicle operated by or for the employer.
Transportation Management Programs ( <i>Planning Code</i> , Section 163)	Requires new buildings or additions of greater than 100,000 square feet in the C-3 Use District, including the proposed project, to implement a Transportation Management Program and provide on-site transportation management brokerage services for the life of the building. The program must be designed to promote transit and ridesharing, reduce parking demand, and allow for flexible work schedules. The project would comply with this requirement.
Transit Impact Development Fee (Administrative Code, Chapter 38)	Establishes a fee of \$5.00 per square foot for downtown office space and \$10.00 per square foot for retail space, paid to the Municipal Transportation Agency to improve local transit services.
Bicycle Parking ( <i>Planning Code</i> , Sections 155.2, 155.4, and 155.5)	The proposed project would provide a minimum of 64 stalls for bicycle parking, which would meet exceed the requirement of Planning Code Section 155.4(d), as well as the proposed requirement of the draft Transit Center District Plan.
Car Sharing Requirements (Planning Code, Section 166)	Car-share parking spaces are required only in new residential projects. Nevertheless, the proposed project would provide three spaces dedicated to shared electric vehicles (with battery charging capability)
San Francisco Green Building Requirements for Energy Efficiency ( <i>Building Code</i> , Chapter 13C)	Projects such as the proposed 350 Mission Street building that are registered under LEED v2.2 must use the published LEED v2.2 rules to demonstrate the proposed building has an annual energy cost at least 14.0% less than a LEED baseline building. As a LEED Gold building, the proposed 350 Mission Street project would comply with this requirement.
San Francisco Green Building Requirements for Stormwater Management ( <i>Building Code</i> , Chapter 13C)	All projects in San Francisco are required to comply with the SFPUC's stormwater design guidelines, which emphasize low impact development using a variety of Best Management Practices for managing stormwater runoff and reducing impervious surfaces, thereby reducing the volume of combined stormwater and sanitary sewage requiring treatment. The proposed project would comply with this requirement.
San Francisco Green Building Requirements for water reduction ( <i>Building Code</i> , Chapter 13C)	New large commercial buildings (over 25,000 square feet), such as the proposed project, are required to reduce the amount of potable water used for landscaping by 50% and reduce the amount of potable water used for the building by 20% (increasing to 30% in 2011), compared to conventional construction (baseline fixture performance requirements of the federal Energy Policy Act of 1992). As a LEED Gold building, the proposed 350 Mission Street project would comply with these requirements.
San Francisco Green Building Requirements for renewable energy (SF Building Code, Chapter 13C)	These provisions require that a LEED version 2.2 certified building be documented to use 14% less energy than a conventional building. As a LEED Gold building, the proposed 350 Mission Street project would comply with this requirement.
Commercial and Residential Water Conservation Ordinances ( <i>Building Code</i> , Chapters 13A and Housing Code, Chapter 12A)	Requires projects to meet minimum standards for water conservation, including use of low-flow (2.5 gallons per minute [gpm]) showerheads, use of no more than one showerhead per valve, use of low-flow (2.2 gpm) faucets, use of low-flow toilets (1.6 gallons per flush) and urinals (1 gallon per flush), and repair of all water leaks. As a LEED Gold building, the proposed 350 Mission Street project would comply with these requirements.
San Francisco Green Building Requirements for solid waste ( <i>Building Code</i> , Chapter 13C)	Pursuant to Section 1304C.0.4 of the Green Building Ordinance, all new construction, renovation and alterations subject to the ordinance are required to provide recycling, composting and trash storage, collection, and loading that is convenient for all users of the building. As a LEED Gold building, the proposed 350 Mission Street project would comply with this requirement.

# TABLE 9 (continued) CITY GHG REGULATIONS APPLICABLE TO THE PROPOSED PROJECT

Regulation	Project Requirement
San Francisco Green Building Requirements for construction and demolition debris recycling ( <i>Building Code</i> , Chapter 13C)	Large buildings (over 25,000 square feet), such as the proposed project, must divert at least 75% of construction debris from landfills. The proposed 350 Mission Street project would comply with this requirement.
Construction Demolition and Debris Recovery Ordinance (Environment Code, Chapter 14)	This ordinance requires that at least 65 percent of all construction and demolition material to be diverted from landfills. As noted above, the proposed 350 Mission Street project would be subject to the more stringent Green Building requirements of the <i>Building</i> Code, and so would also comply with this requirement.
Street Tree Planting Requirements for New Construction ( <i>Planning Code</i> Section 143)	The proposed project would include planting of new street trees on the Fremont and Mission Street project frontages, consistent with <i>Planning Code</i> requirements.

and employment growth elsewhere in the Bay Area, where transit service is generally less available than in the central city of San Francisco.<sup>82</sup> Additionally, through the process of LEED® Certification under the Gold category and the project's "green" building components and compliance with the City's regulations discussed above, GHG emissions produced by the proposed project would be reduced compared to what would otherwise be the case for conventional construction. Moreover, the project would generate 3.3 metric tons of CO2E/year per service population (employee). Given that San Francisco has implemented binding and enforceable programs to reduce GHG emissions applicable to the proposed project and that San Francisco's sustainable policies have resulted in the measured success of reduced GHG emissions levels, the proposed project's GHG emissions would result in a less than significant impact.

# Impact GG-2: The proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant)

As noted above in the discussion of the Regulatory Environment, the AB 32 Scoping Plan states that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. The Air Resources Board acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. While some of the GHG reduction measures contained in the Scoping Plan, such as increasing energy efficiency in new construction, installation of solar panels on individual building roofs, and a "green building" strategy, are at least partially applicable to development projects, many measures in the Scoping Plan (increased fuel efficiency, increased efficiency by utilities, increased use of renewable energy) require statewide action by government, industry, or both, that is outside the purview of the City and individual developers.

The California Air Pollution Control Officers' CEQA and Climate Change (January 2008) white paper identifies infill development as yielding a "high" emissions reduction score (between 3-30%). This paper is available online at: <a href="http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf">http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf</a>. Accessed April 15, 2008.

As described above, the City has developed its own strategy to address greenhouse gas emissions on a local level. The vision of the strategy is expressed in the City's Climate Action Plan, however implementation of the strategy is appropriately articulated within other citywide plans (*General Plan*, Sustainability Plan, etc.), policies (Transit-First Policy, Precautionary Principle Policy), and regulations (Green Building Ordinance, *Building Code*, *Planning Code*), and other provisions.

The proposed project would be required to comply with all San Francisco ordinances and regulations that are aimed at reducing GHG emissions (see Table 9). The project would also be required to comply with other GHG reduction regulations, such as applicable AB 32 Scoping Plan measures that are ultimately adopted and become effective during implementation of proposed project. Given that the City has adopted an extensive array of GHG reduction strategies recommended in the AB 32 Scoping Plan, that the City's GHG reduction strategy includes binding, enforceable measures to be applied to development projects, such as the proposed project, and that the City's GHG reduction strategy has produced measurable reductions in GHG emissions, the proposed project would not conflict with either the state or local GHG reduction strategies. In addition, the proposed project would not conflict with any plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Therefore, the proposed project would have a less than significant impact with respect to plans for reduction of GHG emissions.

# Mitigation and Improvement Measures

Because no significant impacts are identified in the above analysis, no mitigation is required.

# E. Wind

This section describes potential wind effects of the proposed project, based upon wind-tunnel testing of a scale model of the proposed project and models of nearby potential cumulative development.<sup>83</sup>

# Setting

Tall buildings and structures can strongly affect the wind environment for pedestrians. Groups of structures tend to slow the winds near ground level, due to the friction and drag of the structures themselves on winds. Buildings that are much taller than their surrounding buildings intercept and redirect winds that might otherwise flow overhead, and bring them down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and also relatively turbulent, and can be incompatible with the intended uses of nearby ground-level spaces. In addition, building designs that present tall flat surfaces square to strong winds can create ground-level winds that can prove to be hazardous to pedestrians in the vicinity.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to 4 miles per hour (mph) have no noticeable effect on pedestrian comfort. With velocity from 4 to 8 mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole, while winds from 13 to 19 mph will raise loose paper, dust and dry soil, and will disarrange hair. For wind velocities from 19 to 26 mph, the force of the wind will be felt on the body. At 26 to 34 mph, umbrellas are used with difficulty; hair is blown straight; there is difficulty in walking steadily; and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over.

# Regulatory Framework

In order to provide a comfortable wind environment for people in San Francisco, the City has established comfort criteria to be used in the evaluation of proposed buildings. Section 148 of the *Planning Code* specifically outlines these criteria for the Downtown Commercial (C-3) Districts, including the project site. <sup>84</sup> The comfort criteria are based on pedestrian-level wind speeds that include the effects of turbulence; these are referred to as "equivalent wind speeds" (defined in the *Planning Code* as "an hourly mean wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians").

Planning Code Section 148 establishes equivalent wind speeds of 7 mph as the comfort criterion for seating areas and 11 mph as the comfort criterion for areas of substantial pedestrian use, and states that new buildings and additions to buildings may not cause ground-level winds to exceed these levels more

Rowan Williams Davies & Irwin Inc., "Technical Memorandum: Potential Wind Conditions, Proposed 350 Mission Street Development, San Francisco, California," June 1, 2010. This document is included in Appendix C.

Additional Planning Code sections apply the same criteria to the Rincon Hill, Van Ness Avenue, and South of Market areas.

than 10 percent of the time year round between 7:00 a.m. and 6:00 p.m.<sup>85</sup> If existing wind speeds exceed the comfort level, or when a project would result in exceedances of the comfort criteria, an exception may be granted, pursuant to Section 309, if the building or addition cannot be designed to meet the criteria "without creating an unattractive and ungainly building form and without unduly restricting the development potential" of the site, and it is concluded that the exceedance(s) of the criteria would be insubstantial "because of the limited amount by which the comfort level is exceeded, the limited location in which the comfort level is exceeded, or the limited time during which the comfort level is exceeded." Section 148 also establishes a hazard criterion, which is a 26 mph equivalent wind speed for a single full hour, or approximately 0.0114% of the time. Under Section 148, new buildings and additions may not cause wind speeds that meet or exceed this hazard criterion.<sup>86</sup> Under Section 148, no exception may be granted for buildings that result in winds that exceed the hazard criterion.

The comfort criteria are based on wind speeds that are measured for one minute and averaged. In contrast, the hazard criterion is based on wind speeds that are measured for one hour and averaged; when stated on the same basis as the comfort criteria wind speeds, the hazard criterion wind speed is a one-minute average of 36 mph.

# **Existing Wind Conditions**

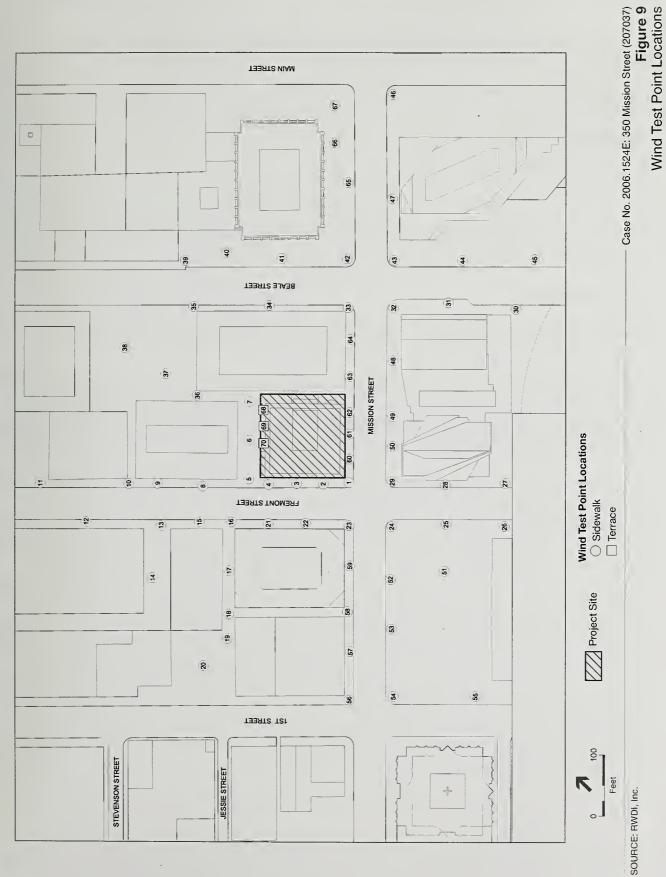
The general vicinity of the project site is sheltered to moderately windy; the average wind speed for the 67 points tested in the wind tunnel (see **Figure 9**) is 9 mph.<sup>87</sup> Wind speeds in pedestrian areas range from 6 to 18 mph, and in seating areas, from 5 to 16 mph.<sup>88</sup> Wind speeds in excess of the 11-mph pedestrian comfort criterion currently occur at eight of the 70 locations and exceedances of the 7-mph seating comfort criterion currently occur at 10 locations of the 14 seating locations (winds at six of these locations would also exceed the 11-mph pedestrian criterion), for a total of 18 exceedances of the Section 148 wind speed criteria. The highest wind speed in the vicinity (18 mph) occurs along the Fremont Street sidewalk just south of Market Street, at the southwest corner of the privately owned, publicly accessible open space at 333 Market Street [test point #11].

The *Planning Code* specifies the hours of 7:00 a.m. to 6:00 p.m. In contrast, the available weather data, as aggregated, cover the hours of 6:00 a.m. to 8:00 p.m. Thus, observations from two additional evening hours and one additional morning hour are included in the wind speed distribution data.

Because the hazard criterion is stated in terms of 1 hour of exceedance, it is most appropriate to report exceedances of this criterion in terms of the number of hours per year that the excess occurs, rather than the accompanying wind speeds. Thus, for each wind analysis, the number of locations and the total sum of the durations of exceedances of the hazard criterion are important measures of effect. This differs from reporting of both comfort criteria, for which wind speeds exceeded 10% of the time are examined and presented, but statistics other than the number of locations are not detailed.

Wind speed" refers to equivalent wind speed (including the effects of turbulence) that is exceeded 10 percent of the time.

For purposes of this analysis, all privately owned, publicly accessible open spaces are considered seating areas, even if they are effectively passageways between buildings, with no provision for formal seating. Pedestrian areas include all sidewalks. Thus, the analysis is conservative.



The Code's wind hazard criterion of 36 mph is not exceeded at any of the test locations under existing conditions.

# **Impacts**

# Significance Criteria

A project would normally have a significant impact if it would:

Cause the 26 miles per hour wind hazard criterion to be exceeded for more than one hour per year.

A project that would cause exceedances of the comfort criteria, but not the wind hazard criterion, would not be considered to have a significant impact.

# **Impact Analysis**

Impact WI-1: The proposed project would not result in a new exceedance of the wind hazard criterion, either individually or cumulatively. (Less than Significant)

Wind tunnel testing was performed for the proposed project, the results of which are summarized in the following discussion. **Figure 9**, p. 106, depicts the wind test point locations. A subsequent evaluation for the currently proposed design concluded that wind speeds in the vicinity should be similar to those measured during testing for the previous design.

As indicated in **Table 10**, the wind-tunnel testing demonstrated that the project would result in relatively modest changes in ground-level winds. Wind conditions would continue to be moderately windy; the average wind speed would remain 9 mph. Wind speeds at 70 test points—including three points on the project site, on a terrace outside and north of the mezzanine-level restaurant—would range from 4 to 20 mph, with the highest speed continuing to be adjacent to the 333 Market Street open space. In seating areas, wind speeds would range from 4 to 16 mph, while in pedestrian areas, they would range from 6 to 20 mph. With the project, there would be 19 exceedances of the Section 148 wind-speed criterion, or one more than without the project. Of these 19 exceedances, nine would exceed the 11-mph pedestrian-comfort criterion and 10 of the 17 seating criterion locations<sup>89</sup> would exceed the 7-mph seating criterion (of which six would have wind speeds in excess of 11 mph). One existing exceedance of the 11-mph criterion would be eliminated (northwest across Fremont Street from the project site [point #16]), while two new 11-mph exceedances would be created, one farther north on the west side of Fremont Street [#12] and one on the west side of Beale Street between Mission and Market Streets [#35]. In each case, the change in wind speed would be 1 mph (12 to 11 mph for the former location, and 11 to 12 mph for the latter two locations), and likely would not be perceptible to most observers.

Under project conditions, the wind-tunnel test included three new seating area test points on the project's mezzanine-level outdoor terrace. The wind speeds at each of these locations would be less than 7 mph.

### **TABLE 10: WIND TEST RESULTS**

		V	Vind Comfo	ort Analysi	s: Criterio	n Speed 1	1 mph (7	mph for se	eating	area	as)			_			
		Ex	isting Sett	ing		Existing pl	us Project				(	Cumu	lative	а			
Point Number	Comfort Criterion Speed	Wind Speed (mph)	% time Exceeds Criterion	Exceed- ance?	Wind Speed (mph)	% time Exceeds Criterion	Chg. Fr. Exist.	Exceed- ance?	Spe	nd eed ph)		ime eeds erion	Char	nge <sup>b</sup>	Exceed- ance?		
1 2 3 4 5 6 7 8	11 11 11 11 11 7 7 7 11	8 6 7 8 5 7 7	1 0 0 0 0 0 0 0		8 6 6 7 7 6 7	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 -1 -1 2 1 0		12 14 17 17 15 14 7 8	9 10 15 17 14 12 7 8 14	13 23 31 33 24 21 0 1 20	2 6 24 33 22 13 0 1 20	4 8 11 10 7 9 2 1 7	1 4 9 11 7 5 1 1	•	11111 E. LUCKIN	
10 11 12 13 14 15 16 17 18 19 20	11 11 11 11 7 11 11 7 7 7	12 18 11 10 9 8 12 14 14 16 12	13 41 10 5 3 1 14 21 23 30 13		20 12 10 9 8 11 14 15 16 12	15 44 12 6 4 1 10 21 24 24 32 16	0 3 1 0 0 0 -1 0 1 1		13 18 8 12 10 12 18 17 15 13 9	12 20 11 12 12 9 18 16 14 14 9	20 40 1 14 5 14 38 35 27 18 3	16 44 8 14 13 2 37 31 23 20 2	1 0 -3 2 1 4 6 3 1 -3 -3	0 0 -1 2 3 1 7 2 -1 -2 -3	•		
21 22 23 24 25 26 27 28 29 30	11 11 11 11 11 11 11 11 11	6 6 7 9 7 9 10 6 9 8	0 0 2 0 2 6 0 2 2		6 6 7 9 7 8 10 6 9	0 0 0 2 1 1 1 6 0 2 4	0 0 0 0 0 -1 0 0 0		9 10 9 11 11 10 12 9 10	12 10 9 12 11 9 13 8 11	3 7 3 10 10 6 16 2 6 4	14 6 2 12 8 5 18 1 10 7	3 4 2 2 4 1 2 3 1	6 4 2 3 4 1 3 2 2	•	A LITTURE AND THE PROPERTY OF	
31 32 33 34 35 36 37 38 39	11 11 11 11 11 7 7 7 7 11	10 10 11 12 11 8 8 8 8	5 7 10 15 10 1 1 1 1 22	•	10 11 11 12 12 8 8 8 8 14	6 10 10 16 16 2 1 1 24 20	0 0 0 1 1 0 0 0		11 12 12 13 13 7 8 8 17	10 11 12 13 13 9 8 9 18	11 13 18 20 17 1 1 2 38 24	7 10 17 21 18 2 1 2 38 26	1 2 1 1 2 -1 0 0 3 2	0 0 1 1 1 1 0 1 4 2			
41 42 43 44 45 46 47 48 49 50	7 11 11 11 11 11 11 11 11	12 11 11 11 10 8 8 10 7 6	16 10 10 10 4 3 1 5 0	•	13 11 11 11 10 8 9 9	18 10 10 10 7 2 4 3 0 0	1 0 0 0 0 0 1 -1 -1	•	14 12 12 11 11 8 9 9	15 13 12 12 11 8 9 10 8 8	22 17 13 10 10 2 3 3 1	25 20 17 15 10 2 4 6 1	2 1 1 0 1 0 1 -1 1 3	2 2 1 1 1 0 0 1 2	•	The state of the s	
51 52 53 54 55 56 57 58 59 60	11 11 11 11 11 11 11 11 11	9 10 9 13 7 13 6 13 6	2 7 4 18 0 19 0 16 0	•	9 10 10 14 7 13 6 12 6 6	3 8 6 22 0 19 0 14 0	0 0 1 1 0 0 0 -1 0		11 15 14 11 8 11 8 11 9 6	11 15 14 11 8 11 8 14 9 8	13 25 23 10 1 10 2 13 3 0	10   25   21   10   2   21   2   1   0	2 5 5 -2 1 -2 2 -2 3 0	2 5 4 -3 1 -2 2 2 3 2	•		
62 63 64 65 66 67 68 69 70	11 11 11 11 11 7 7 7 7 7	7 6 6 7 7 6 n/a n/a n/a	0 0 0 0 0 0 n/a n/a n/a		7 6 6 7 7 6 6 4 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 n/a n/a n/a		6 6 7 7 7 7 n/a n/a n/a	6 6 7 8 7 6 7	0 0 0 0 1 1 n/a n/a n/a	0 0 0 1 1 0 0 5 11	0 -1 0 1 0 1 n/a n/a n/a n/a n/a	-1 0 0 0 1 1 0 3 5 n/a		The second of th	

a First entry under each heading represents Cumulative without Project (i.e., Existing plus Cumulative); second entry is Cumulative with Project.

b First entry represents change in wind speed from Existing wind speed; second entry is Change in wind speed from Project wind speed.

<sup>• -</sup> Indicates Exceedance of Criterion; ■ - Indicates Exceedance in a Prior Scenario îs Eliminated; n/a - Not Applicable.

TABLE 10: WIND TEST RESULTS (continued)

						Analysis:										
		Exi	sting Settir	ng		Existing pl	us Project		Cumul.	w/o Proj.	oj. Cumulative with Proje					
Point Number	Hazard Criterion Speed	Wind Speed (mph)	Hrs./Yr. Exceeds Criterion	Exceed -ance?	Wind Speed (mph)	Hrs./Yr. Exceeds Criterion	Change from Existing	Exceed -ance?	Wind Speed (mph)	Change from Existing	Wind Speed (mph)	Change from Project	Change fr. Cum. w/o Proj.			
1	36	16	<1	-	14	<1	0	-	20	4	16	2	-4			
2 3	36 36	13 12	<1 <1	_	15 12	<1 <1	0	_	25 29	12 17	18 26	3 14	-7 -3			
4	36	13	<1 .	-	12	<1	-1	İ –	30	17	29	17	-1			
5 6	36 36	13 10	<1 <1	_	14 12	<1 <1	-1 2		25 24	12 14	24 20	10	-1 -4			
7	36	10	<1	_	14	<1	1	_	12	2	12	-2	0			
8	36	12	<1	-	13	<1	0	-	14	2	15	2	1			
9 10	36 36	14 20	<1 <1	_	15 21	<1 <1	0	_ ,	24	10 3	24 22	9	0 -1			
11	36	32	<1	_	34	<1	3	i –	31	-1	35	1	4			
12	36	19	<1	-	20	<1	1	-	15	-4	20	0	5			
13 14	36 36	17 16	<1 <1	_	18 16	<1 <1	0	_	21 18	4 2	21 21	3 5	0 3			
15	36	13	<1	-	15	<b>1</b> <1	0	-	21	8	16	1	-5			
16 17	36 36	21 23	<1 <1	_	20 24	<1 <1	-1 0	_	30 29	9	30 28	10	0 -1			
18	36	23	<1	_	25		l 1	<u> </u>	26	2	26	1	0			
19	36	27	<1	_	28	<1	1	-	25	-2	27	-1	2			
20 21	36 36	22 12	<1		23 10	<1 <1	1 0	-	16 19	-6 7	16 21	-7 11	0 2			
22	36	12	<1	_	11	<1	0	_	18	6	18	7	ō			
23	36	13	<1	-	13	<1	0	<u> </u>	16	3	15	2	-1			
24 25	36 36	15 13	<1 <1		16 13	<1 <1	0	_	20 21	5 8	21 20	5 7	1 -1			
26	36	15	<1	-	14	<1	-1	-	20	5	20	6	0			
27	36	18	<1	-	18	<1	0	-	22	4	23	5	1			
28 29	36 36	12 17	<1 <1	_	11 18	<1   <1	0	<u> </u>	17 18	5	16 20	5 2	-1 2			
30	36	17	<1	-	18	<1	1	<u> </u>	17	0	18	0	1			
31	36 36	18	<1 <1	-	18	<1 <1	0 0	_	20	2 2	19	1	-1 0			
32 33	36	19 20	<1	_	20 21	<1	0	_	21 23	3	21 21	0	-2			
34	36	22	<1	_	23	<1	1	-	24	2	24	1	0			
35 36	36 36	21 15	<1 <1	_	23 15	<1 <1	1 0		24 16	3	24 15	1 0	0 -1			
37	36	13	<1	_	14	<1	0	_	13	Ö	15	1	2			
38	36	13	<1	-	14	<1	0	ļ -	15	2	15	1	0			
39 40	36 36	25 23	<1 <1	_	26 24	<1 <1	0	_	31 25	6 2	31 26	5 2	0			
41	36	21	<1	-	23	<1	1	_	25	4	25	2	0			
42	36	19	<1	-	21	<1	0	-	22	3	22	1	- 0			
43 44	36 36	19 19	<1 <1	_	20 21	<1 <1	0	_	21 21	2 2	21 22	1 1	0 ′			
45	36	18	<1	-	19	<1	0	-	21	3	20	1	-1			
46 47	36 36	18 15	<1	_	17 19	<1 <1	0		17 19	-1 4	17 19	0	0			
48	36	18	<1	_	16	<1	1	i -	16	-2	17	1	1			
49	36	13	<1	_	12	<1	-1	_	14	1	15	3	1			
50 51	<u>36</u> 36	13 15	<1	_	14 16	<1 <1	0		16 20	3 5	16 19	2 3	-1			
52	36	19	<1	_	19	<1	0	_	27	8	26	7	-1			
53 54	36 36	17 23	<1 <1	_	18 25	<1 <1	1	_	25 22 13	8 -1	24 21	6 -4	-1 -1			
54 55	36	13	<1	_	13	<1	0	i –	13	0	14	1	1			
56	36	25	<1	_	25	<1	0	-	21	-4	21	-4	0			
57 58	36 36	11 22	<1 <1	_	12 22	<1   <1	0   -1	_	18 20	7 -2	16 24	4 2	-2 4			
59	36	12	<1	_	12	<1	0	_	17	5 -2	16	4	-1			
60	36	13	<1		13	<1	0	_	11	-2	14	1 1	3			
61 62	36 36	13 14	<1 <1	_	14 14	<1 <1	0		11 11	-2 -3	13 13	-1 -1	-2 -2 -2 -1			
63	36	12	<1	-	12	<1	0	_	10	-2	12	0	-2			
64 65	36 36	12 12	<1	_	11	<1	0	_	11	-1	12	1				
66	36	12	<1 <1	_	12 12	<1 <1	0	_	14 14	2 2	14 14	2 2	0			
67	36	14	<1	-	13	<1	0	-	17	3	17	4	0			
68 69	36 36	n/a n/a	n/a n/a	_	14 9	<1 <1	n/a n/a	-	n/a n/a	n/a n/a	13 12	-1 3	n/a			
70	36	n/a	n/a		9	<1	n/a		n/a	n/a	17	8	n/a n/a			
Avg.		17	n/a		17	4 6	n/a	•	19	form to the first property of the first prop	20		- Control of the Cont			
Exceedar	nces			0				0	0	garage.	0					

 $<sup>^{\</sup>rm C}$  Equivalent to a wind speed of 36 mph when stated on the same basis as the comfort criteria wind speeds.

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<sup>• -</sup> Indicates Exceedance of Criterion; ■ - Indicates Exceedance in a Prior Scenario is Eliminated; n/a - Not Applicable.

In general, wind speeds would change little with the project: speeds would increase at 15 locations, generally by 1 to 2 mph, except at the location adjacent to the 333 Market Street open space, where the increase would be 3 mph. Wind speeds would decrease by 1 mph at seven locations, while at 45 of the 67 test locations (three project-scenario test locations do not exist under existing conditions), there would be no change in wind speeds with the project. Wind speeds around the base of, and across the street from, the proposed project would be largely unchanged, compared with existing conditions.

The project would result in no wind hazard exceedances, and therefore would have no significant effect related to wind. However, the project sponsor would seek an exception to the requirements of *Planning Code* Section 148 because the project would result in a net increase of one exceedance of the pedestrian comfort criterion and would not eliminate all existing wind speed exceedances of the pedestrian comfort level criterion.

Cumulative effects of the project were analyzed which considered development in the vicinity of several very tall buildings proposed or under consideration in the area around the Transbay Terminal, and other areas within the proposed Transit Center District Plan, which would permit, on certain parcels, greater building heights than are currently allowed. This cumulative test scenario included the following potential future buildings in the vicinity of the project site: the proposed Transit Tower (1,000 feet, plus potential sculptural elements to 1,200 feet), diagonally across the Mission/Fremont Streets intersection from the project site; two towers on a site a the northwest corner of First and Mission Streets (915 feet [including sculptural elements] and 605 feet); a 700-foot tower on the Golden Gate University site; a 700-foot tower at 181 Fremont Street; two towers on the north side of Howard Street between First and Second Streets (750 feet and 400 feet); and a 400-foot tower at 41 Tehama Street.

Under this cumulative scenario, the average wind speed would increase by about 2 mph, compared to with-project conditions, and by about 2 mph compared to existing conditions, to 11 mph. Compared to the project scenario, wind speeds would increase at 52 of the 70 test locations and decrease at 7 locations, while remaining unchanged at 11 locations. Under the cumulative scenario, wind speeds would exceed the comfort criteria at 34 of the 70 test points, an increase of 15 exceedance locations compared to existing-plus-project conditions. Overall, average wind speeds at the 70 test points would range from 6 to 20 mph, which is comparable to the range of 4 to 20 mph in the existing-plus-project scenario. Wind speeds would increase by more than 3 mph at 14 locations, and by more than 5 mph, at six locations. Three of these six locations of greatest increase in wind speeds would be along and just north of the proposed project building's Fremont Street façade, while one would be farther north on the project side of Fremont Street

Some of the cumulative buildings tested were at heights greater than may be constructed (e.g., the Transit Tower is now proposed in the draft Transit Center District Plan to be 1,000 feet tall but is anticipated to have additional sculptural elements; and the taller tower at First and Mission Streets is proposed to be 850 feet tall, but could have additional mechanical and possibly sculptural elements). Additionally, some of the sites tested (Golden Gate University, one of the towers on Howard Street) do not have active plans on file with the Planning Department. Thus, the results of the cumulative wind test can be considered to be conservative.

Compared to existing conditions, wind speeds would increase under cumulative conditions at 51 locations, decrease at 5 locations, and remain unchanged at 11 locations (three project-scenario test locations do not exist under existing conditions).

and two would be on the opposite (west) side of Fremont between Mission and Market Streets. The greatest increase in wind speed would be 11 mph, and would occur at the project's northwest corner, on the Fremont Street sidewalk. The windiest location would continue to be at the southwest corner of the 333 Market Street plaza, which would have a wind speed of 20 mph, the same as under with-project conditions. The average wind speed at the 70 test locations would be 10.9 mph, an increase of 1.9 mph compared to existing-plus-project conditions. No new exceedances of the wind hazard criterion would occur under the cumulative scenario.

In order to determine whether, and how much, effect the proposed 350 Mission Street project would have on wind speeds under cumulative conditions, an additional wind-tunnel test was undertaken that included the cumulative buildings in the Transit Center District Plan area noted above, but without development on the 350 Mission project site. The purpose of this additional wind-tunnel test scenario was to determine the contribution of the proposed project to the cumulative-scenario wind conditions. The results of this cumulative-without-project test appear to indicate that the relatively large increase in wind speeds along Fremont Street in the cumulative scenario is likely the result of several buildings in the cumulative scenario being in proximity to one another - four towers of 550 feet or more in height within approximately 300 feet of the intersection of First and Mission Streets. This concentration of towers would replace much shorter buildings and would therefore tend to divert west and northwest winds that currently flow over the shorter buildings, causing at least some of those winds to be channeled eastward, including between buildings located on the project block and the block to the west. Wind speeds would generally vary by only 1 or 2 mph between the cumulative-with-project and cumulative-without-project scenarios. Wind speeds would be the same at nearly half (32 of 67) of the test points. At six test points, the difference in wind between the two cumulative scenarios was 3 to 4 mph; in three instances, speeds were higher with the project and, in the other three, wind speeds were higher without the project. Wind speeds would range from 6 to 18 mph; the location at the southwest corner of the 333 Market Street plaza would continue to have the highest wind speed, at 18 mph (along with a point across Fremont Street from the project site), which would be 2 mph less than under cumulative-with-project conditions. The average wind speed at the 67 test locations would be 10.9 mph, the same as in the cumulative-with-project scenario. As with the cumulative-plus-project scenario, no new exceedances of the wind hazard criterion would occur under the cumulative-without-project scenario. Thus, the potential future development of several tall buildings in the Transit Center District Plan area would govern potential pedestrian wind conditions in the project site vicinity, regardless of whether the 350 Mission Street project is undertaken. 92

In summary, the proposed project would not substantially affect ground–level winds: both average wind speeds and the number of exceedances of the pedestrian comfort criteria would remain virtually unchanged between existing and existing-plus-project conditions. Under both existing and with-project conditions, the project area would be moderately windy, although wind speeds at the vast majority of test locations would meet the applicable comfort criterion of 7 mph or 11 mph under existing-plus-project

It is noted that the Transit Center District Plan calls for a 700-foot-tall building on the 350 Mission Street project site. Because such development is not considered reasonably foreseeable in the context of the proposed 350 Mission Street project that is analyzed in this EIR, such a building was not tested in the wind analysis. That concept will, however, be evaluated in the EIR for the Transit Center District Plan.

conditions, as they do under existing conditions. The project would not result in any new exceedances of the wind hazard criterion. Under cumulative conditions, wind speeds would increase at more than two-thirds of the test points, and the ratio of test points where wind speeds would exceed the pedestrian comfort criteria would approach 50 percent, compared to less than 30 percent under both existing and existing-plus-project conditions. However, wind speeds would be very similar under cumulative conditions both with and without the proposed project, and therefore the proposed 350 Mission Street project would not result in a considerable contribution to cumulative pedestrian wind impacts.

It is noted that fog plays a major role in San Francisco's weather, and in the comfort that pedestrians experience on the sidewalk and in seating areas. Wind-tunnel testing is performed based on actual wind-speed data collected over a five-year period at the Old Federal Building in the Civic Center. The correlation between fog and wind speed is implicit in the actual wind speed – frequency distributions used in the analysis methodology; that is, fog is more likely to be present during the summer, when westerly winds prevail, whereas there is less chance of fog during strong winter storm winds. However, because the wind test results represent conditions over a full year, it is not possible to confirm the presence or absence of fog at a given time during the year.

Based on the foregoing, effects related to wind would be less than significant and no mitigation is required.

# Mitigation and Improvement Measures

Because no significant impacts are identified in the above analysis, no mitigation is required.

# F. Shadow

This section describes shadow effects on publicly accessible areas, including public parks, publicly-accessible private open spaces, and sidewalks.

# Setting

Open space in the project vicinity is limited. Generally, the open space as exists nearby is in the form of publicly accessible, privately owned open space developed, in accordance with the Downtown Plan and Planning Code, in conjunction with newer office buildings. A number of pre-Downtown Plan office buildings, including several in the immediate vicinity of the project site, also include such "POPOS," as they are sometimes known.<sup>93</sup> The closest of these spaces to the project site are located on the project block: those associated with 45 Fremont Street (immediately north of the project site), with 50 Beale Street, and with 333 Market Street; this latter open space is at the corner of Fremont and Market Streets. There are two POPOS on the block across Fremont Street from the site, associated with 50 Fremont Street and 525 Market Street. Other publicly accessible open spaces exist to the west, in association with office buildings both north and south of Mission Street between First and Second Streets, and to the east, at 201 Mission Street, 123 Mission Street, and other office buildings in the block bounded by Mission, Howard, Main, and Spear Streets. There are no public parks or other public open spaces in the immediate project vicinity. The nearest public open space is Justin Herman Plaza, at the foot of Market Street. Proposals for the new Transbay Terminal include a public park located on the roof of the terminal ("City Park"), approximately 70 feet above grade level. However, this park has not been approved for development. Additionally, the draft Transit Center District Plan (November 2009) proposes the creation of a new public open space on the southwest corner of Fremont and Mission Streets ("Mission Square") in association with the proposed Transit Tower. This plaza would be located diagonally across the Fremont/Mission Streets intersection from the project site. The draft Plan also proposes open space at Second and Howard Streets, and a number of improvements to sidewalks and alleys to, in part, improve their attractiveness as public spaces.

# **Regulatory Framework**

## Sunlight Ordinance

Section 295 of the *Planning Code*, the Sunlight Ordinance, was adopted through voter approval of Proposition K in November 1994 to protect certain public open spaces from shadowing by new structures. Section 295 prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would shade property under the jurisdiction of or designated to be acquired by the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset, unless the Planning Commission, following review and comment by the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission, determines that such shade would have an insignificant impact on the use of such property.

POPOS is an acronym for privately owned, public(ly accessible) open space.

The nearest park under Recreation and Park Department jurisdiction and subject to Section 295 is Justin Herman Plaza, at the foot of Market Street; based on preliminary shadow analysis conducted by the Planning Department, this is the only Section 295 open space that is close enough to the project site to potentially be shaded by the project.

## Other Planning Code Regulations

Planning Code Section 147, applicable to the C-3, RSD, SLR, SLI, or SSO zoning districts, where height limits are greater than 40 feet, requires that all new development and additions to existing structures where the height exceeds 50 feet must be shaped to minimize shadow on public plazas or other publicly accessible open spaces other than those protected by Section 295, "in accordance with the guidelines of good design and without unduly restricting the development potential of the property." The following factors must be taken into account in determining compliance with this criterion: the amount of area shadowed, the duration of the shadow, and the importance of sunlight to the type of open space being shadowed.

# **Impacts**

# Significance Criteria

Implementation of the proposed project would have a significant shadow impact if it were to create new shadow in a manner that would:

- Affect, in an adverse manner, the use of any park or open space under the jurisdiction of the Recreation and Park Department;
- Substantially affect the usability of other existing publicly accessible open space or outdoor recreation facilities or other public areas.

# **Impact Analysis**

Impact SH-1: The proposed project would not adversely affect the use of any park or open space under the jurisdiction of the Recreation and Park Department, either individually or cumulatively. (Less than Significant)

To evaluate whether the proposed project would add new shadow to Justin Herman Plaza or any other Recreation and Park Department open space, a computer modeling analysis was undertaken that evaluates project shadow in conjunction with shadow cast by existing buildings. <sup>94</sup> Based on the results of computer modeling of shadows, the proposed project would not cast new shadow on Justin Herman Plaza or on any other open space under the jurisdiction of the San Francisco Recreation and Park Commission between one hour after sunrise and one hour before sunset, and therefore the project would

The preliminary Planning Department analysis noted in the setting does not consider shadow from existing buildings; instead, it merely evaluates whether shadow from the proposed project could reach Section 295 park(s).

comply with *Planning Code* Section 295.<sup>95</sup> Therefore, the proposed project would result in a less-than-significant impact with respect to shadow on Recreation and Park Department open spaces, and would not contribute to any cumulative effects on Recreation and Park Department properties.

Impact SH-2: The proposed project would not substantially affect the usability of existing publicly accessible open space or outdoor recreation facilities or other public areas not under the jurisdiction of the Recreation and Park Department, either individually or cumulatively. (Less than Significant)

Figures 10 through 13, pp. 116 – 119, depict shadow from the proposed project for representative times of day during the four seasons: in December, on the winter solstice, the sun is at its lowest and shadows are at their longest, while on the summer solstice in June, the sun is at its highest and shadows are at their shortest. Shadows are also shown at the spring equinox, when shadows are midway through a period of shortening, and at the fall equinox, when shadows are midway through a period of lengthening. Shadows on any other day of the year would be within the range of shadows presented in Figures 10 through 13.

As shown in Figures 10 through 13, shadow effects from the proposed project would be limited, because the new building would not be taller than most surrounding buildings and because the existing building on the project site, along with the 645-foot-tall Millennium tower across Mission Street, already cast shadow on the closest privately owned, publicly accessible open spaces. Therefore, the proposed project would cast new shadow on one or more of these spaces only around the summer solstice in June, when the sun is highest in the sky and shadows from existing buildings are shortest. At other times of the year, existing buildings already shade the nearby POPOS when the project would otherwise add new shadow. Likewise, existing buildings already shade surrounding streets and sidewalks during most times when the proposed project would otherwise shade these areas.

Because the existing four-story building on the project site is considerably shorter than most development in the vicinity, it has resulted in a somewhat anomalous situation in which two nearby POPOS are in partial sunlight during the midday around the summer solstice, despite the fact that these open spaces are relatively narrow and tucked in between adjacent buildings. The POPOS in question are the walkway immediately north of the project site, between buildings at 350 Mission Street and 45 Fremont Street (Figure 14, p. 120; as this area is on the east side of Fremont Street, it is referred to as the "east side POPOS") and the passageway on the opposite side of Fremont Street, between the loading dock north of the 50 Fremont Street building and the building at 425 Market Street (Figure 15, p. 120; the "west side POPOS"). Each of these POPOS is primarily a pedestrian walkway—also used by smokers—but each also has several benches.

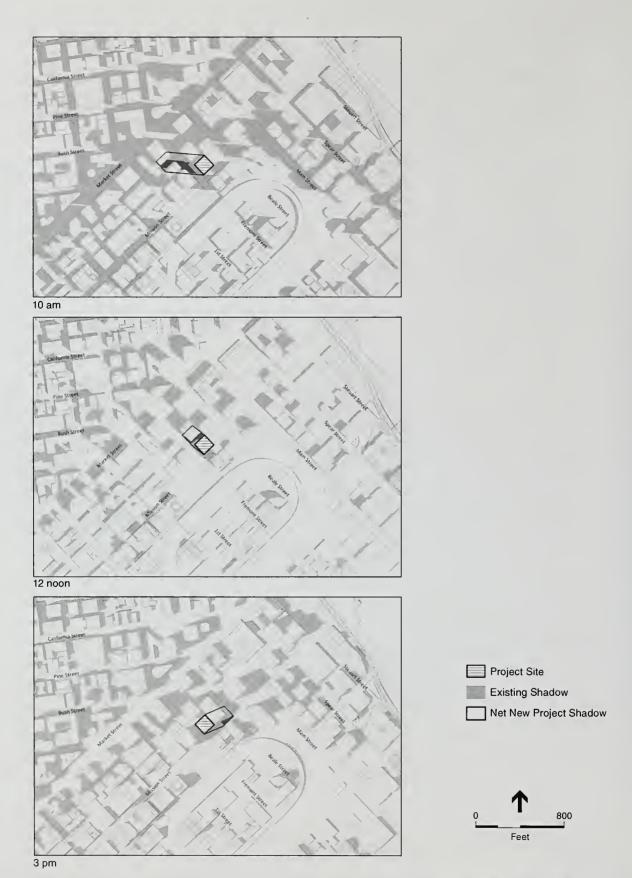
Adam Noble, CADP Inc., Quantitative shadow calculations for Justin Herman Plaza and Redwood Park. This documentation is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1542E.

Although shadow cast by the existing four-story building on the project site is relatively minimal, this shadow does fall on the POPOS immediately north of the project site, adjacent to 45 Fremont Street.



SOURCE: CDAP, Inc.

Case No. 2006.1524E: 350 Mission Street (207037)
Figure 10
March 21 Shadow Patterns



Case No. 2006.1524E: 350 Mission Street (20703)

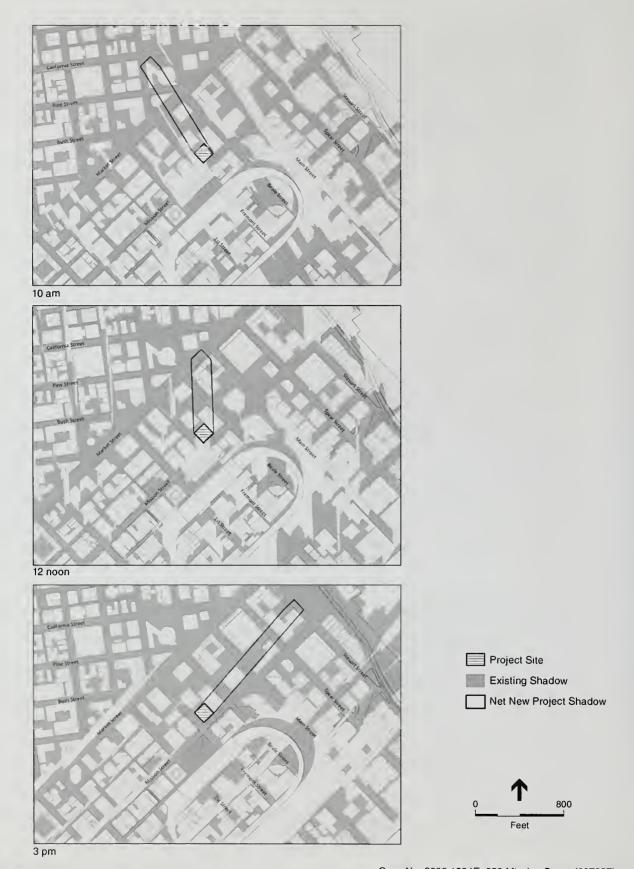
Case No. 2006.1524E: 350 Mission Street (207037)
Figure 11
June 21 Shadow Patterns



SOURCE: CDAP, Inc.

Case No. 2006.1524E: 350 Mission Street (207037)

Figure 12 September 21 Shadow Patterns



Case No. 2006.1524E: 350 Mission Street (207037)
Figure 13
December 21 Shadow Patterns

SOURCE: CDAP, Inc.



Figure 14
East Side POPOS



Figure 15 West Side POPOS

The benches in the east side POPOS are immediately adjacent to the existing 350 Mission Street building and thus are fully shaded under existing conditions, except for a period of about 90 minutes in the mid-

to late afternoon, such as 3:00 p.m. on June 21 (see bottom image on Figure 11), when the sun shines from the westsouthwest, through a gap between buildings at 50 Fremont Street and 425 Market Street, across Fremont Street, and the 45 Fremont Street building, immediately north of the project site. (In the late fall and early winter, the sun does not get far enough to the west to fall on the benches.) Part of the northern portion of this open space is also in midday sunshine in June, especially at the east end, closest to the 50 Beale Street building, where the existing 350 Mission Street building is set back from the POPOS. The sunlight that falls on this open space through a gap between the adjacent 50 Beale Street building and the 645-foot-tall Millennium tower on the south side of Mission Street (Figure 16), and is available for about one hour at approximately 12:00 noon around the summer solstice, from late spring to early summer. At other times of the year, the sun is too low on the



Figure 16
Gap Between 50 Beale and Millennium

horizon to reach this POPOS. This limited sunlight would be obscured by the proposed project. However, the proposed project would not affect the existing mid- to late afternoon sunlight on this POPOS, because at the hours when this sunshine is available, any building on the project site would cast shadow to the north-northeast, away from the benches.

At the west side POPOS, the benches are in midday sunshine in June, as shown in Figure 15. This open space, like the east side POPOS, is primarily used as a pedestrian way, but attracts some lunchtime users.

Project shadow would fall on this open space between about 9:30 a.m. and 10:30 a.m. in late spring and early summer; the west side POPOS would not be shaded by the project in the midday period (this POPOS is shaded during the noon hour by the existing building at 50 Fremont Street), and therefore effects would be less than significant.

This new shadow described above would be of limited duration and would occur at each of the open spaces noted over only a few weeks of the year, for up to about 90 minutes per day, in late spring and early summer. Moreover, the benches in the east side POPOS are largely in shade under existing conditions, and the proposed project would not affect the available afternoon sunlight on these benches. Because of the limited duration and extent, these shadows would not be expected to substantially adversely affect use of the open spaces. Therefore, the project effect relative to shading of publicly accessible open spaces not under the control of the Recreation and Park Department would be less than significant.

Because project shadow on publicly accessible open spaces would be relatively limited, the project appears to comply with *Planning Code* Section 147.

In terms of the proposed project's own publicly accessible open space, as stated in the Project Description, the project proposes an "indoor park" that would occupy portions of the enclosed lobby and public seating areas. The lobby would be three stories (approximately 50 feet) in height and would be accessible from the sidewalk through doors on both Mission and Fremont Streets, and through a folding glass-panel door system, also on both facades near the corner of Mission and Fremont Streets. Large portions of the atrium would be open to the sidewalk in good weather, as the folding panel doors would remain open, providing pedestrian access along almost 75 feet of sidewalk frontage. Publicly accessible open space would be located on both the ground floor and mezzanine, and the atrium would have large expanses of clear glass. Therefore, while not exterior space, the publicly accessible open space in the lobby and mezzanine would receive substantial natural light.

# **Cumulative Impacts**

The proposed project would not cast shadow on the planned "City Park" proposed to be developed on the roof of the new Transit Center because the existing Millennium tower would shade the City Park when the project would otherwise add new shadow. As for the proposed Mission Square, across the Fremont/Mission intersection from the project site, because this proposed open space is due south of the project site, shadow from the proposed 350 Mission Street project would not reach this open space.

Cumulative shadow impacts could occur as a result of other new buildings in the vicinity, including the proposed 1,000-foot-tall Transit Tower (with architectural elements up to about 1,200 feet in height). As described in Chapter III, Land Use, p. 19, a number of high-rise buildings are currently proposed or otherwise under consideration in the area around the Transbay Terminal, in the project vicinity. This includes several other towers that would be taller than permitted by existing height limits. Based on the proposed building heights, it is clear that some of these proposed and planned buildings, including the Transit Tower, would cast shadow on parks protected by Section 295 of the *Planning Code*, as well as on the proposed elevated City Park atop the Transit Center (replacement for the Transbay Terminal). New

shadow from these proposed buildings could potentially result in a significant impact. However, inasmuch as the proposed 350 Mission Street project would not add new shadow to any Recreation and Park Department properties or to the City Park or Mission Square, nor would it substantially interfere with the use of existing POPOS, the proposed project would not make a considerable contribution to potential future shadow effects.

Therefore, cumulative impacts would not be significant, and no mitigation is required.

# Mitigation and Improvement Measures

Because no significant impacts are identified in the above analysis, no mitigation is required.

# G. Initial Study Issues

Some of the comments received in response to the Notice of Preparation (NOP) raised questions with respect to specific information provided in the Initial Study that was published along with the NOP. Information is provided here to clarify or amplify certain of the responses to the questions in the Initial Study checklist.

#### Issue: Displacement of Heald College

A comment asked if it is known where and whether Heald College, the existing primary tenant in the building currently on the project site, would relocate as a result having to leave the site, and whether the new location would be transit-accessible

<u>RESPONSE</u>: Heald College has indicated, in an Abbreviated Institutional Master Plan dated June 18, 2010, that the institution will be moving its San Francisco campus from 350 Mission Street to 875 Howard Street; according to Heald College staff, this move will occur around the end of 2010.<sup>97</sup> The 875 Howard Street site is two blocks south of the BART/Muni Metro Powell Street Station, at Fifth and Howard Streets.

### Issue: Areas of Sky Currently Visible That Would Be "Filled In"

A comment asked for explication of a statement in the Initial Study Aesthetics section that stated that a portion of open sky would be "filled in" by the project.

<u>RESPONSE</u>: The text on p. 21 of the Initial Study refers to Figure 11, Initial Study p. 27, which illustrates that an area of sky visible over the existing 350 Mission Street building would be "filled in" by the proposed project. Another view, showing the existing visibility of the sky from north of the 350 Mission Street building, is shown in this EIR in Figure 16, p. 120.

## Issue: Economic Impacts of Project Housing Demand

A comment asked for information on the estimated income levels of residents in housing units for which the project would create new demand.

<u>RESPONSE</u>: Although housing affordability is not a CEQA issue, the following is provided for information. Office occupations—both office and administrative support and management positions—are the number one and two occupations among workers living in San Francisco, according to 2000 Census data. There is a substantial disparity among wages among lower-wage office and administrative support occupations and higher-wage management occupations: according to 2000 Census data, the mean annual wage for office and administrative support workers was approximately \$38,400, while the mean for

The Abbreviated Institutional Master Plan is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E. The anticipated move schedule was provided by Kristin Moritz, Director of Strategic Planning for Heald College, on September 13, 2010.

management jobs was over \$111,000. <sup>98</sup> Clearly, workers in management positions are better able to afford housing in San Francisco than support workers. One consequence of this wage differential is that lower-wage workers in jobs at the proposed 350 Mission Street office building (and in the jobs in the retail and restaurant/café spaces) are unlikely to relocate to San Francisco for a new job, and thus such jobs are more likely to be filled by persons already living in the City, or elsewhere in the Bay Area. Demand for new housing resulting from the proposed project is therefore more likely to come from higher-wage workers. In addition, as noted in the Initial Study (p. 10), "The project would be required to comply with the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 *et. seq.*), which would require that the project sponsor either fund the construction of 92 affordable housing units<sup>99</sup> or pay an in-lieu fee to the City in the amount of \$19.89 per gross square foot of office space."

#### Issue: Construction Noise, Including Cumulative Construction Noise

A comment asked whether the presence of nearby residential units would affect construction scheduling, for purposes of noise control.

<u>RESPONSE</u>: As stated on Initial Study p. 44, construction is generally prohibited between 8:00 p.m. and 7:00 a.m. by the San Francisco Noise Ordinance. These hours are typically more sensitive to residential receptors.

# Issue: Adequacy of Existing and Proposed Open Space, Including Shading

A comment questioned whether parks such as Sue Bierman Park and Maritime Plaza are really "nearby," and asked for information concerning when parks would be used and newly shadowed; another comment asked about potential cumulative shadow effects.

**RESPONSE:** Sue Bierman Park (formerly known as Ferry Park) and Maritime Plaza are both between Clay and Washington Streets; together, they extend from the Embarcadero to Battery Street. These parks are about one-half mile north of the project site and thus are at the limit of typical walking distance (for transit analysis, one-quarter mile is frequently considered walking distance to a bus, while one-half mile is considered walking distance to a rail line). Thus, these parks open spaces are not immediately proximate to the project site, but are still within walking distance and, although the Initial Study did not identify them as "nearby" (stating only that they are among the "closest" open spaces to the site), they could reasonably considered as such.

In terms of proposed open spaces in the project vicinity, the Initial Study refers to the planned park ("City Park") atop the new Transit Center, the planned Mission Square adjacent to the Transit Tower and diagonally across the Mission/Fremont Streets intersection from the project site, and the planned Transbay Park between Beale Street, Tehama Street, Main Street, and Clementina Street. The Transit Center is scheduled to open in 2017; it can thus reasonably be assumed that City Park would be complete

San Francisco Planning Department, *Eastern Neighborhoods Rezoning and Area Plans Environmental Impact Report* (Case No. 2004.0160E), Final EIR Certified August 7, 2008; Table 28, p. 208.

Based on 0.00027 housing units per gross square foot of office development and a project of 340,000 square feet of gross floor area, per *Planning Code* Section 313.5.

and open to the public at that time. Assuming that the 350 Mission Street project proceeds as scheduled, the new building would be open for perhaps four years prior to the completion of City Park. Construction of Mission Square would likely be tied to the development of the Transit Tower, for which no definitive schedule is available. Likewise, it is not known when the planned Transbay Park will be built; construction of that open space is likely tied to development of approved residential projects along Folsom Street within Zone One of the Transbay Redevelopment Plan.

#### Issue: Project's Proposed LEED Certification Versus City Requirements

A comment asked for a comparison between the project's proposed LEED certification and the standing requirements of the City's Green Building Ordinance and other applicable regulations.

**RESPONSE**: Requirements of the City's recently adopted Green Building Ordinance are discussed in Section IV.D, Greenhouse Gases, and particularly in Table 9, City GHG Regulations Applicable to the Proposed Project, p. 101.

#### Issues: Earthquake Hazards, and Flooding Potential as a Result of Sea Level Rise

Comments were raised concerning the assumed lifespan of the proposed building relative to risk of a large earthquake and of sea level rise, and concerning earthquake-related hazards for persons outside the proposed project.

**RESPONSE**: Buildings are typically assumed to last 50 years (or more, as evidenced by the fact that San Francisco retains many pre-1906 structures and that Downtown contains a number of office buildings dating from the 1920s). Therefore, given that the United States Geological Survey (USGS) estimates that there is a 63 percent probability of a strong earthquake (Moment magnitude 6.7 or higher) occurring on one of the regional faults in the 30-year period between 2007 and 2036, 100 it is likely that the project site and vicinity would be subject to a strong earthquake. Accordingly, the Initial Study discusses risks related to earthquakes and notes, among other things, that the likelihood of ground rupture at the site is very low, because there are no known active faults in the immediate vicinity (or within the City limits). Nevertheless, as stated on Initial Study p. 63, the site is subject to "very violent" groundshaking from an earthquake on the San Andreas or Hayward faults. As also stated in the Initial Study, the proposed project would follow the recommendations of site-specific geotechnical analyses conducted for the project, thereby reducing the potential for earthquake-induced groundshaking to a less-than-significant level. There is no feasible mitigation that could be undertaken by the project sponsor to reduce seismic risks elsewhere in San Francisco. However, the City is continuing to address earthquake risks through implementation of the Unreinforced Masonry Building Ordinance and through the ongoing Community Action Plan for Seismic Safety.

Concerning sea level rise, as noted in the Initial Study (p. 71), the Bay Conservation and Development Commission (BCDC) has estimated that the level of San Francisco Bay could rise more than 4.5 feet by

<sup>100</sup> U.S. Geologic Survey (USGS), The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), by the Working Group on California Earthquake Probabilities, Open File Report 2007-1437, 2008.

2100, although even with that increase in sea level, the project site is not shown on BCDC maps as being inundated. Concerning the availability of maps illustrating flooding potential and potential sea level rise, website locations for both are referenced in the Initial Study, at footnotes 46 and 47, p. 71. The City's preliminary floodplain maps may be reviewed on the website of the City's General Services Agency (<a href="http://sfgsa.org/index.aspx?page=828">http://sfgsa.org/index.aspx?page=828</a>), while BCDC's sea level rise maps are available on the BCDC climate change website (<a href="http://www.bcdc.ca.gov/planning/climate\_change/climate\_change.shtml">http://www.bcdc.ca.gov/planning/climate\_change/climate\_change.shtml</a>), which also contains a 2009 BCDC staff report regarding vulnerability of the Bay shoreline to sea level rise and s discussion of adaptation planning. In addition, the recently published EIR for the San Francisco General Plan Housing Element contains a map (Figure V.P-4, p. V.P-49) that shows potential housing units in areas at risk of inundation due to rising sea levels. This map, available on the Planning Department website at: <a href="http://www.sf-planning.org/ftp/files/MEA/2007.1275E\_SFHE\_DEIR\_SectionV.P.pdf">http://www.sf-planning.org/ftp/files/MEA/2007.1275E\_SFHE\_DEIR\_SectionV.P.pdf</a>, shows areas of potential inundation due to sea level rise as mapped by BCDC.

#### Issue: Potential Soil and Groundwater Contamination

A comment was made regarding potential soil and groundwater contamination and the fact that previous soil testing at the site is inadequate, particularly in light of contamination at the site of a nearby project.

**RESPONSE**: As stated in the Initial Study (p. 74), based on the information available, soil testing conducted in 1997 appears to have been done at a depth of no more than 10 feet, in connection with a seismic upgrade undertaken at that time. Because the proposed project would require excavation to a depth of approximately 50 feet below grade, additional soil (and groundwater) sampling would be required after the existing building is demolished. Accordingly, Mitigation Measure M-HZ-2a would require implementation of a work plan to accomplish such testing. As stated on p. 75 of the Initial Study, the San Francisco Department of Public Health, Environmental Health Section, Hazardous Waste Unit, has reviewed and approved the work plan. Concerning the site at Howard and Beale Streets (the EIR noted by the commenter was prepared for a project at 300 Howard Street, subsequently constructed as 199 Fremont Street), one block south of the project site. The 300 Howard Street (199 Fremont Street) site had, in the mid-19th century, been across Fremont Street from the San Francisco Gas Light Company, which produced gas (for lighting) from coal, discharging a tarry waste byproduct into San Francisco Bay (including the 300 Howard Street site before it was reclaimed), and giving the area the name, "Tar Flat." Coal storage and iron works occupied the 300 Howard Street site in the 19th century. While the 350 Mission project site was also occupied by 19th century industrial uses, including a foundry and machine shop, there was no prior use of the 350 Mission Street site that produced industrial waste as notorious as the residue from coal gasification. At any rate, implementation of Mitigation Measure M-HZ-2a would ensure that any contamination of the project site would be identified and remediated, if applicable, prior to soil-disturbing activity.

# **CHAPTER V**

# Other CEQA Considerations

# A. Growth Inducement

In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development in other nearby areas that might not occur if the project were not approved and implemented, particularly if the project would facilitate growth by removing a major obstacle to development in a particular area (such as by provision of major new public services to an area where those services are not currently available). The proposed project would consist of development of a single office tower on a site currently developed with a four-story office and retail building, in a heavily developed area of downtown San Francisco, in a manner consistent with the Downtown Plan and existing zoning on the site. The proposed project would not necessitate or induce the extension of municipal infrastructure. The project would be constructed in an area that is part of the City's South Financial District and is also the location of recent and current projects such as the Millennium residential tower and the new Transit Center. As such, the proposed project would not be expected to substantially alter development patterns in Downtown or elsewhere in San Francisco. The site is also within two blocks of continuing high-density residential development on Rincon Hill. As a result, the project could potentially benefit from enhanced future transportation connections and could provide employment for some nearby residents.

The proposed project would consist of infill in a developed urban area, with services and transit available, and could be considered a response to the increasing mixed-use character of the project vicinity, as much as a potential inducement to further growth. To the extent that employees in the project's new office tower were to live nearby, the project would result in substantially less impact on transportation systems and air quality than would development of a similar amount of office space in a more outlying part of the Bay Area where fewer services and less transit access is provided. Moreover, the proposed project would be developed in an existing established employment center—downtown San Francisco—that is served by existing infrastructure, including transit. That is, the project would not create a substantial concentration of new employment in an area that is lacking basic services that would have to be newly provided for.

In view of the above, there is no reason to conclude that the project would result in substantial additional development in the project site vicinity that would not otherwise occur, and the project thus would not result in substantial inducement to further growth.

# B. Significant Environmental Effects that Cannot Be Avoided if the Proposed Project Is Implemented

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Sections 15040, 15081 and 15082 of the State CEQA Guidelines, potential impacts that could not be eliminated or reduced to an insignificant level are limited to transportation effects.

# **Transportation**

Cumulative construction impacts could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles. Mitigation would require that the project sponsor and/or construction contractor coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Golden Gate Transit, as well as Muni, AC Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic. Other projects, including the new Transit Center, would undertake similar coordination. Nevertheless, despite the best efforts of the project sponsor and project construction contractor, it is possible that simultaneous construction of the proposed project and the Transit Center could result in substantial disruption to Golden Gate Transit operations, should both projects simultaneously preclude use of the Fremont Street curb lane as an afternoon bus embarkation site. Although mitigation is identified that could relocate Golden Gate Transit buses to an existing boarding island in Fremont Street near Market Street, this impact is conservatively judged to be significant and unavoidable.

# Air Quality

The proposed project's construction-related emissions would generate a cancer risk and concentrations of fine particulate (PM25) that would both exceed the Bay Area Air Quality Management District (BAAQMD)'s recently adopted (June 2010) thresholds of significance. (Previously, the BAAQMD did not recommend quantification of construction emissions.) The use of diesel construction equipment meeting the California Air Resources board/United States Environmental Protection Agency interim Tier 4 emissions standards could reduce both cancer risk and PM2.5 to levels below the BAAQMD significance thresholds (interim Tier 4 standards are approximately 90 percent more restrictive than current emissions standards for off-road engines). However, this equipment is not currently readily available. Mitigation would require limitations on idling time of construction equipment; development of a plan to reduce diesel emissions below current the California Air Resources Board fleet average; use of Best Available Control Technology for nitrogen oxides and particulate matter; and use of equipment meeting ARB's most recent certification standard for off-road heavy duty diesel engines. Nevertheless, this impact is conservatively assumed to remain significant and unavoidable, in light of the uncertainty concerning the actual diesel construction equipment to be used and the availability of cleaner diesel construction equipment in the near-term future. Cumulative construction impacts would occur from other projects in the vicinity, most notably including the new Transit Terminal across Mission Street from the project site, as well as several other projects with Planning Department applications on file in the area and other

potential developments. Given the proximity of the new Transit Center to the 350 Mission Street project site, there is the potential that cumulative construction emissions would exceed the BAAQMD's significance criteria for cumulative impacts, which are 100 in one million cancer risk non-cancer hazard index of 10, and a PM2.5 concentration of 0.8 micrograms per cubic meter. Despite emissions controls, because it cannot be stated with certainty that either cancer risk or PM2.5 concentration would be reduced to below the BAAQMD-recommended significance thresholds, the cumulative impact is likewise conservatively judged to be significant and unavoidable.

No other significant impacts were identified that could not be mitigated to a less-than-significant level.

# C. Areas of Known Controversy and Issues to Be Resolved

On the basis of public comments on the NOP, potential areas of controversy and unresolved issues for this project include cumulative construction effects; cumulative shadow and wind impacts, including cumulative effects related to projects having been granted bulk exceptions; shadow and wind impacts on the project's own open space; consistency with the proposed Transit Center District Plan; displacement of Heald College; visual effects concerning blockage of the sky; economic impacts of housing demand generated by the project; construction noise; the adequacy of open space; LEED certification versus City requirements for energy and water conservation and other "green" features; seismic effects; flooding potential as a result of anticipated sea level rise; and effects related to potential soil and groundwater contamination. These issues are discussed in this EIR.

# **CHAPTER VI**

# Alternatives to the Proposed Project

This chapter identifies alternatives to the proposed project and discusses environmental impacts associated with each alternative. Project decision-makers could adopt any of the following alternatives, if feasible, instead of approving the proposed project.

# A. Alternative A: No Project

# Description

This alternative would entail no change to the site, which would remain in its existing condition. The existing building at 350 Mission Street would continue to function as an office building for the foreseeable future. (It is noted that Heald College, the current primary tenant, has already announced plans to relocate; however, the building is assumed to be occupied by other educational and/or office tenants.)

# **Impacts**

Under this alternative, the project impacts that are described in Chapter IV would not occur. This alternative would also avoid the proposed project's significant but mitigable effects with respect to conflicts between vehicles using the project parking garage and loading dock and other vehicles, including Golden Gate Transit buses, and with pedestrians, and would also avoid the project's significant but mitigable effect with respect to oversize trucks using the project loading dock. Cumulative construction-related transportation impacts could be significant, but this alternative would make no contribution to such impacts. There would be no significant impact on intersection level of service (LOS); although five study intersections that currently operate at LOS E or F would continue to do so, this alternative would make no contribution to this impact. With no construction, this alternative would avoid the project's significant, unmitigable construction-related air quality effects. With no excavation, this alternative would avoid the project's significant but mitigable effect on archeological resources. Under this alternative, no new structure would be built, and this alternative would therefore avoid the project's less-than-significant impacts on shadow, and wind. Also, this alternative would result in no emissions of criteria pollutants, and would avoid the project's less-than-significant impacts on air quality and greenhouse gases. Additionally, none of the other less-than-significant impacts identified in this Initial Study would occur under this alternative.

This alternative would not result in any new significant impacts that would not arise with the proposed project.

# **B. Code-Complying Bulk Alternative**

# **Description**

This alternative would entail development of a building the same height as the proposed project—a 24-story, 375-foot-tall building containing the same mix of uses as the proposed project: office space on floors 5 through 27 (no 13th floor), and ground-floor/mezzanine restaurant/retail/café space, and parking. However, unlike the proposed project, this alternative would comply with the tower separation requirements of Planning Code Section 132.1(c) and with the bulk requirements of Planning Code Section 270. As a result, this alternative, unlike the project would have setbacks above the building base, at a height of approximately 103 feet, and in the upper tower portion of the building, above a height of approximately 220 feet. The lower tower—the portion immediately above the base—would have 15-foot setbacks from the north and east property lines, consistent with Section 132.1(c) requirements. To meet the requirements of Section 270, the topmost four floors would have additional setbacks of 15 feet, also on the north and east sides of the building. The setbacks would reduce the size of this alternative's office component, resulting in 310,000 square feet of office space (292,000 square feet of gross floor area) of office space, about 13 percent less office space than with the proposed project. <sup>101</sup> This alternative is presumed to have the same 50-foot-tall ground-floor atrium, and approximately the same retail and restaurant space and publicly accessible open space as would the proposed project. 102 Figure 17 depicts elevations of this alternative.

As a result of the upper-story setbacks, this alternative would comply with the upper-tower maximum average floor plate size of 12,000 square feet, and upper-tower maximum average diagonal dimension of 160 feet. Thus, this alternative would not require exceptions, under Section 309, to the requirements of Section 132.1(c) and 270, as would the proposed project. This alternative would, like the proposed project, require an exception to the *Planning Code's* ground-level wind current requirements (Section 148) because this alternative would likewise not reduce all existing exceedances of the wind speed criteria for pedestrian and seating comfort.

Because this alternative would have less gross floor area, it would have a corresponding decrease in the basement space available for parking, because *Planning Code* Section 151.1 limits parking to 7 percent of the building's gross floor area. Therefore, two basement levels would be provided (one fewer than with the project), and approximately 45 on-site parking spaces would be included in this alternative, about 16 fewer than with the project. Like the project, this alternative would include two loading spaces and

It is assumed that the addition of more relatively small floors to make up the square footage lost by compliance with the bulk requirements would not be desirable to a developer, because the upper-story floor plates might be too small to justify adding additional levels. The project sponsor is proposing a building of less height than allowed under existing zoning because the project site limits the size of the floor plate and a substantially taller building would lose a greater percentage of usable office space for elevator banks and related equipment. Therefore, this alternative would effectively also be a reduced-density alternative.

The decrease in gross floor area would reduce the required publicly accessible open space by about 900 square feet, meaning that the open space within the atrium would be reduced and reconfigured somewhat; however, it is assumed that the layout would be fundamentally similar to that of the proposed project.

SOURCE: ESA

two service vehicle spaces, and 64 bicycle parking spaces. Also like the project, this alternative would require an exception to the *Code's* prohibition on curb cuts along Transit Preferential Streets where an alternative frontage is available. This alternative would also include the fitness center for building tenants' use, as is proposed with the project. The floor area ratio of this alternative would be about 15.4:1, compared to 18:1 with the proposed project.

# **Impacts**

With 13 percent less office space than the proposed project, Alternative B would generate about 13 percent fewer net new peak-hour vehicle trips than the proposed project. This would incrementally reduce the project's less-than-significant traffic and transit ridership impacts. Cumulative traffic impacts would likewise be reduced, compared to the project, and this alternative, like the project, would not result in significant cumulative traffic impacts, although, as with the project, the large volume of cumulative Bay Bridge-bound traffic generated by other existing and proposed development would result in degradation of intersection levels of service at many area intersections, including all of the study intersections. This alternative would reduce, but not avoid, the project's significant impacts with respect to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage and loading dock via the proposed driveway on Fremont Street, and with respect to oversize trucks using the loading dock. However, as with the project, these impacts could be mitigated to a less-than-significant level by relocating Golden Gate Transit bus stops, posting a garage/loading dock attendant, installation of audible warning devices, limiting loading dock hours, and limiting the size of trucks using the loading dock. Cumulative construction effects on transportation, notably Golden Gate Transit buses, would be significant and unavoidable, as with the proposed project.

As with the project, construction-related air quality impacts would be significant and unmitigable. Daily vehicle trips would be about 13 percent fewer than with the project, reducing operational emissions of criteria air pollutants by a like amount and reducing the project's less-than-significant emissions of these pollutants. Greenhouse gas emissions would similarly be reduced, reducing the project's less-than-significant impact in this regard, as well.

The tower under this alternative would cast incrementally less shadow on surrounding streets and sidewalks due to the upper story setbacks; shadow impacts would be less than significant, as with the project. Wind effects of this alternative would be similar to or slightly less substantial than those of the proposed project, also because of the upper-story setbacks, and would be less than significant. Ground-level wind speeds could be incrementally reduced from those indicated for the project in Section IV.E, primarily due to the setback above the building base, which would tend to reduce ground-level wind speeds by interfering with winds streaming down the face of the building; as with the project, but would not be expected to change dramatically, given that this alternative would, like the project, construct a high-rise building that would be shorter than most nearby development. However, as with the project, this alternative would likely not eliminate all existing exceedances of the pedestrian comfort criterion (similar to conditions with the proposed project) and, like the project, this alternative would require an exception to the ground-level wind current requirements of *Planning Code* Section 148. Land use impacts would also be the same as those of the project, because the same uses would be developed.

Other less-than-significant impacts discussed in the Initial Study and related to the intensity of development, including noise impacts, effects on population and housing, recreation and public space, utilities and service systems, and public services, would be incrementally less substantial under this alternative than they would with the project because of the lesser amount of development proposed; as with the project, those impacts would be less than significant. Effects related to conditions at the project site, including impacts on cultural resources, geology, hydrology, biology, hazards, mineral/energy resources, and agricultural resources, would be essentially the same under this alternative as with the project because the same site would be developed, and would also be less than significant, with the same mitigation, as applicable, as with the proposed project.

This alternative would not result in any new significant impacts that would not arise with the proposed project.

# C. No-Parking Alternative

# Description

This alternative would include the same development program as the proposed project (24-story tower with 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of open space, plus two off-street loading spaces and two service vehicle spaces), but would include no off-street parking, with the exception of the three spaces dedicated to shared electric vehicles (with battery charging capability). Like the project, this alternative would include 64 bicycle parking spaces. This alternative would also include the fitness center for building tenants' use, as is proposed with the project. Under this alternative, excavation would be required for a single basement level to accommodate building mechanical equipment, car-share and bicycle parking, and the fitness center. Above grade, this alternative would resemble the proposed project, and would construct a 375-foot-tall building (including 20-foot mechanical penthouse), with the same 50-foot-tall combined ground floor and mezzanine that would include publicly accessible open space, retail, café, and restaurant space, and the building lobby. This alternative would require the same *Planning Code* exceptions as would the proposed project, regarding building bulk, separation of towers, ground-level winds, and prohibition on curb cuts along Transit Preferential Streets where an alternative frontage is available.

# **Impacts**

The No Parking Alternative would avoid the proposed project's significant but mitigable effect related to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage, because this alternative would have no garage. However, because off-street loading facilities would be comparable, this alternative would result in the same impacts as would the proposed project with respect to potential conflicts between pedestrians and vehicles using the proposed loading dock via the proposed driveway on Fremont Street. As with the proposed project, however, this impact would be mitigated by posting a loading dock attendant and limiting loading dock hours. It is also assumed that, with no garage, the loading dock, driveway, and ramps could be re-sized to allow use of

the loading dock by larger trucks, thereby avoiding the project's significant but mitigable impact with respect to oversize trucks.

With the same office floor area and the same restaurant/retail space, the No-Parking Alternative would have similar impacts related to the intensity of development as the proposed project. Trip generation would be the same as with the proposed project, because these calculations are based on development floor area; however, with no on-site parking (except for car-share vehicles), distribution of project trips would be somewhat different than that of the project, because all persons driving to the site would have to park elsewhere. However, like the proposed project, this alternative would not be expected to result in significant traffic impacts, as some vehicle trips would be destined to and from the building in any case, including drivers dropping off passengers (including taxi), delivery vehicles, and certain visitors, and all vehicle trips would be made to the general project vicinity. Therefore, the redistribution of traffic would not be expected to substantially increase volumes at any of the study intersections. Cumulative traffic impacts would be essentially the same as those of the project and, like the project, this alternative would not contribute considerably to cumulative significant traffic impacts, although, as with the project, the large volume of cumulative Bay Bridge-bound traffic generated by other existing and proposed development would result in degradation of intersection levels of service at many area intersections, including all of the study intersections. Cumulative construction effects on transportation, notably Golden Gate Transit buses, would be significant and unavoidable, as with the proposed project. As with the project, construction-related air quality impacts would be significant and unmitigable. However, operational air quality impacts, which are based on trip generation and the size of the building, would be the same as those of the proposed project, and would be less than significant, as would greenhouse gas impacts.

Because this alternative would develop the same above-grade building as the proposed project, shadow and wind effects (related to the building massing) would be the same as those of the proposed project, and would be less than significant. Land use impacts would also be the same as those of the project, because the same uses would be developed. Other less-than-significant impacts discussed in the Initial Study and related to the intensity of development, including effects on population and housing, recreation and public space, utilities and service systems, and public services, would be the same under this alternative as with the project. Noise impacts would be essentially the same as those of the project, because the redistribution of project traffic in the immediate vicinity of the project site would not be sufficient to alter traffic-generated noise impacts, compared to those of the project; as with the project, these impacts would be less than significant. Effects related to conditions at the project site, including impacts on cultural resources, geology, hydrology, biology, hazards, mineral/energy resources, and agriculture/forest resources, would be essentially the same under this alternative as with the project because the same site would be developed, albeit with less excavation, and would also be less than significant, with the same mitigation, where applicable, as with the project.

This alternative would not result in any new significant impacts that would not arise with the proposed project.

# D. Environmentally Superior Alternative

The No Project Alternative would result in no significant new traffic impacts or impacts related to air quality, noise, GHG emissions, aesthetics, historical resources, shadow, or wind. Thus, the No Project Alternative would be the Environmentally Superior Alternative. However, the CEQA Guidelines (Sec. 15126.6(e)) requires that if the No Project Alternative is identified as the environmentally superior alternative, a second alternative shall be identified as environmentally superior. Therefore, the No Parking Alternative is discussed below.

The No Parking Alternative (Alternative C) would avoid the project's significant but mitigable effect related to potential conflicts between pedestrians and Golden Gate Transit buses, and vehicles using the proposed parking garage, as well as the project's significant but mitigable effect with respect to oversize trucks. This alternative would not avoid the project's significant but mitigable impact related to potential conflicts between pedestrians and vehicles using the proposed loading dock via the proposed driveway on Fremont Street, although this impact would be mitigated by posting a loading dock attendant and limiting loading dock hours, as with the project. This alternative also would not avoid the project's significant, unmitigable cumulative construction-period effects on transportation, notably Golden Gate Transit buses, nor the significant, unavoidable construction-related air quality impacts. On balance, however, Alternative C is considered the "environmentally superior alternative" under CEQA.

# **CHAPTER VII**

# Comments and Responses

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# A. Introduction

# Purpose of the Comments and Responses Document

This document contains public comments received on the Draft Environmental Impact Report (Draft EIR, or DEIR) prepared for the proposed 350 Mission Street project (State Clearinghouse No. 2010062013), and responses to those comments. Also included in this document are text changes initiated by Planning Department staff as well as text changes in response to comments on the Draft EIR.

# **Environmental Review Process**

On September 15, 2010, the San Francisco Planning Department published the Draft EIR on the 350 Mission Street office project for public review and comment. The public review and comment period on the document extended from September 15 through November 2, 2010. During the 48-day public review period, the San Francisco Planning Department received written comments sent through the mail or by hand-delivery, fax, or email (see Attachment A). Oral comments were received at the public hearing on the Draft EIR (no members of the public commented). A court reporter was present at the public hearing, transcribed the oral comments verbatim, and prepared a written transcript (see Attachment B).

This Comments and Responses document has been distributed to the San Francisco Planning Commission, State Clearinghouse, agencies and individuals who commented on the Draft EIR. This document, which responds to comments received on the Draft EIR and includes associated revisions to the Draft EIR, in combination with the Draft EIR, constitutes the Final EIR for the 350 Mission Street project. The Final EIR must be certified by the Planning Commission prior to consideration of the proposed project for approval.

# **Document Organization**

Following Section A, Introduction, Section B contains a list of all persons and organizations who submitted written comments on the Draft EIR and who testified at the public hearing on the Draft EIR held on October 28, 2010.

Section C contains summaries of substantive comments on the Draft EIR made orally during the public hearing and received in writing during the public comment period, from September 15 through November 2, 2010. Comments are grouped by environmental topic and generally correspond to the table of contents of the Draft EIR. However, if no comments addressed a particular topic, that topic does not appear in this document. The name of the commenter is indicated following each comment summary.

Section D contains text changes to the Draft EIR made by the EIR preparers subsequent to publication of the Draft EIR to correct or clarify information presented in the DEIR, including changes to the DEIR text made in response to comments. Section D also contains revised DEIR figures.

Although the DEIR public comment period was intended to run from September 15 through November 1, 2010, the close of the comment period was extended by one day because the original public hearing date at the Planning Commission was continued by one week.

Some of the responses to comments on the Draft EIR provide clarification regarding the DEIR; where applicable, changes have been made to the text of the DEIR, and are shown in <u>double underline</u> for additions and <u>strikethrough</u> for deletions.

Some comments made both in writing and at the public hearing were directed towards the merits of the proposed 350 Mission Street project. No responses are provided to these comments, unless they concern the adequacy or accuracy of the EIR.

The comment letters received and the transcript of the public hearing are reproduced in Attachments 1 and 2, respectively.

These comments and responses will be incorporated into the Final EIR as a new chapter. Text changes resulting from comments and responses will also be incorporated in the Final EIR, as indicated in the responses.

# **B. List of Persons Commenting**

#### **Written Comments**

# **Public Agencies**

- Jean Roggenkamp, Deputy Air Pollution Control Officer, Bay Area Air Quality Management District; letter, November 2, 2010
- Ron Downing, Director of Planning, Golden Gate Bridge, Highway, and Transportation District (GGBHTD); letter, October 7, 2010
- Hilda Lefebre, Manager, Capital Projects & Environmental Planning, San Mateo County Transit District; letter, October 26, 2010

#### **Others**

- Alex DeGood, Jeffer Mangels Butler & Mitchell LLP, on behalf of 50 Beale Street Property LLC; letter, November 2, 2010
- Sue C. Hestor, Attorney at Law, on behalf of San Franciscans for Reasonable Growth; letter, November 2, 2010

# Persons Commenting at the Public Hearing, October 28, 2010

Commissioner Michael Antonini

Commission President Ron Miguel

# C. Summary of Comments and Responses

# **General Comments**

#### Comment [G1]

"I thought it was very well done .... I think it was a very well written EIR and I'm very happy with the EIR." (Commissioner Antonini)

"I think the EIR was complete, it was certainly adequate..." (Commission President Miguel)

#### Response

The comments are noted.

# Plans and Policies

### Comment [PP1]

"The DEIR provides minimal analysis or discussion with respect to the Project's non-conforming tower setback and bulk exceptions to the requirements of *Planning Code* sections 132.1(c) and 270, other than to merely state that such exceptions will be required. As noted in the DEIR, the Project will encroach significantly into the required 15 foot setback up to 300 feet and the required 21 foot setback from 300 to 375 feet on the east property line against the Adjacent Property. This would result in a very narrow separation of approximately only 12.5 feet between the Project and the Adjacent Property, rather than the 21 feet that would result from a code compliant project (and 27 feet above 300 feet in height).

"In addition, this massing appears to be inconsistent with Downtown Plan ('Plan') Policy 13.4, which requires separation between buildings to preserve light and air and to prevent excessive bulk. The DEIR does not address this apparent inconsistency between the Plan and proposed massing plan. As the Project does not appear to be in compliance with the Plan, the DEIR does not provide sufficient information to demonstrate that there would be no adverse effects associated with the Project's tower setback and bulk exceptions." (Alex DeGood)

#### Response

The fact that the project would not comply with the setback and bulk requirements of *Planning Code* Section 132.1(c) and 270 is discussed at several locations in the EIR, including the Project Description (pp. 13, 21, and 22) and Chapter III, Compatibility with Existing Zoning and Plans (pp. 31 – 32). As noted on p. 31 of the EIR, and as shown in Figure 4, p. 10, the project would be set back from its property line above the building base for about 14 feet for most of the project's eastern façade. However, as proposed, a 40-foot-wide mechanical element would extend about 7.5 feet into this setback, reducing the property line setback to about 6.5 feet for this 40-footportion of the project's eastern facade. As stated on EIR p. 13, the *Planning Code* requires a "15-foot setback from the top of the building base to a height of 300 feet, increasing to 21 feet at the 375-foot top of the building crown, or parapet," and thus the setback proposed as part of the

project would not comply with the *Code* with respect to the north and east property lines, and "an exception would be required, as is permitted under *Planning Code* Section 309." The portions of the building that would not comply with the setback requirement is illustrated in EIR Figure 7, p. 16; the non-compliant areas are shaded and labeled, "Area of Tower Outside of Setback."

Because the building at 50 Beale Street is set back about 6 feet from its westerly property line, the actual physical setback of the proposed project from the building at 50 Beale Street would be about 20 feet, except for the portion of the project site within the 40-foot-wide mechanical element, where the physical setback from the 50 Beale Street building would be about 12.5 feet.<sup>2</sup>

The physical effects of the setback and bulk exceptions that are requested for the proposed project are analyzed in relevant sections of the EIR, including Section IV.E, Wind, p. 104, and Section IV.F, Shadow, p. 113, as well as Section E.2, Aesthetics, of the Initial Study, EIR Appendix A, p. 20. In particular, the visual simulations in Figures 9 and 10 of the Initial Study, Appendix A, pp. 26 and 26, show the proximity of the proposed project to the adjacent building at 50 Beale Street. Aesthetic effects analyzed in the EIR, including the Initial Study, are generally those that would be readily apparent to the general public, as opposed to effects on individuals such as tenants in or owners of an adjacent building whose views may be obstructed or exposure to light reduced. It is noted that a number of California appellate courts have held, in the case of aesthetic impacts generally, that relevant considerations include whether the impact would be widely observed, particularly from public viewpoints.

Regarding Downtown Plan Policy 13.4, this policy states, "Maintain separation between buildings to preserve light and air and prevent excessive bulk"; the policy also refers to a diagram concerning the appropriate setbacks. The diagram is the same diagram that illustrates the setbacks required by Section 132.1(c) of the *Planning Code*, which implements this aspect of the Downtown Plan. Thus, in terms of any potential physical effects of the project, the discussion of Section 132.1(c) is also relevant to Policy 13.4. For clarification, the following text is added to the bottom of EIR p. 25 (new text is <u>double-underlined</u>):

Policy 13.2 Foster sculpturing of building form to create less overpowering buildings and more interesting building tops, particularly the tops of towers.

<u>Policy 13.4 Maintain separation between buildings to preserve light and air and prevent excessive bulk.</u>

As also noted, the proposed project would require an exception from the requirement of *Planning Code* Section 132.1(c) with respect to separation of towers, and from the requirement of Section 270(d) with respect to the bulk of the upper tower. Although the project would require the foregoing exceptions, the physical effects of the setback and bulk exceptions that would be required for

The building at 50 Beale Street was constructed in 1967, according to Assessor's data, and therefore was not required to meet the current *Planning Code* setback requirements.

the project are analyzed in relevant sections of this EIR, including Section IV.E, Wind, and Section IV.F, Shadow, as well as Section E.2, Aesthetics, of the Initial Study, EIR Appendix A. No significant effects were identified with respect to wind, shadow, aesthetics, or other topics potentially affected by the proposed setback in the EIR.

#### Comment [PP2]

"Once again a developer wants EXCEPTIONS from code provisions that should sculpt the building and provide some relief from canyon effects on people nearby. It is as though the Downtown Plan is a total joke. There should be a totally code-complying project design set out an analyzed so that an informed decision could be made. This is just another project maxing out the site BEYOND what the Code set out. Exception after exception with no ability to see the environmental, aesthetic, climate impact of those repeated exceptions.

"This lack of information on those building mass exception is compounded by another exception for WIND exceedances." (Sue C. Hestor)

#### Response

As described in the preceding response, the physical effects of the setback and bulk exceptions that would be required for development of the project are analyzed in relevant sections of the EIR. Wind effects, in particular, are analyzed in Section IV.E, EIR p. 104, where it is found that the project as proposed (including the requested exceptions) would not result in a significant effect on pedestrian-level winds. As described in the EIR, the project would result in relatively minor changes in wind speeds: as stated on EIR p. 110, at 45 of 67 test locations, ground-level measured wind speeds would not change with introduction of the proposed project.<sup>3</sup> Of the remaining 22 locations, wind speeds would increase at 15 locations, generally by 1 to 2 mph (3 mph at one location), while wind speeds would decrease by 1 mph at seven locations. Because wind speeds would generally change by no more than 2 mph, and because this change would barely be perceptible to most pedestrians, the project's effects would be minimal.

It is noted that the requested exception to the *Planning Code* Section 148 wind provisions is because the project would result in a net increase of one exceedance of the pedestrian comfort criterion<sup>4</sup> and would not eliminate all existing wind speed exceedances of the pedestrian comfort level criterion. As stated on p. 33 of the EIR, "the vast majority of projects involving high-rise buildings that have been approved since adoption of the Downtown Plan have required, and have been granted, an exception to the *Planning Code* wind requirement that, 'When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements.' This is because existing winds at many

As stated in EIR footnote 87, p. 105, "wind speed" refers to equivalent wind speed (including the effects of turbulence) that is exceeded 10 percent of the time.

As stated on EIR p. 107, there would be two new exceedances, while one existing exceedance would be eliminated: in all three cases, the increase or decrease in wind speed would be 1 mph.

locations in Downtown San Francisco exceed both the comfort criterion of 7 miles per hour (mph) in public seating areas and the comfort criterion of 11 mph in areas of substantial pedestrian use (generally, sidewalks), and it is generally not feasible to design a new building that would reduce existing wind speeds such that the these criteria would be met, or, in many instances, to avoid creating a certain number of new exceedances."

In the case of the proposed 350 Mission Street project, existing wind speeds exceed the applicable comfort criteria at 18 of 67 test locations. It is almost inconceivable that a building remotely approaching the permitted height and density could be designed to eliminate all existing comfort criteria exceedances. In this, winds in the vicinity of the project site are like those in most of the rest of downtown San Francisco in that wind speeds at many locations exceed one or both comfort criteria, and therefore an exception would be required to the provisions of *Planning Code* Section 148.

Concerning other exceptions, the EIR on p. 33 briefly describes the history of exceptions granted to Planning Code bulk requirements, stating that more than 30 projects have been approved involving buildings that required exceptions to Code Section 270 (bulk). Of these, nearly two dozen have been built or are under construction (others were built that required an exception to Section 148 but not Section 270), "including essentially all major downtown buildings built since the adoption of the Downtown Plan." Thus, the commenter's apparent contention that the bulk guidance in the Downtown Plan has not been wholly followed in the case of many subsequent projects appears substantially correct. It is noted, however, that the *Planning Code*, which implements the Downtown Plan and the remainder of the General Plan, expressly includes provisions in Section 309 for the granting of exceptions to various Code requirements, including those regarding bulk (Sections 270 and 272) and ground-level winds (Section 148), as well those concerning setback and rear yard requirements (Sections 132.1 and 134(d); sidewalk sunlight (Section 146); parking and off-street loading (Section 151.1(e), 155(c), 155(r), 155(s), 161(h), and 162); and height of vertical extensions and upper tower extensions (Sections 260(b)(1)(G) and 263.7).<sup>5</sup> The granting of one or more exceptions for the project, which requires Planning Commission approval, must be made on the basis of specific findings, which are considered on the basis of a Planning Department staff report that is prepared separately from the environmental review process.

As stated in the California Environmental Quality Act (*California Public Resources Code* Section 21002.1(a), "The purpose of an environmental impact report is to identify the significant effects on the environment of a project," as well as to identify mitigation measures and alternatives that would avoid or reduce the severity of these impacts. The "effects" analyzed in an EIR must involve physical changes (CEQA Guidelines Section 15358(b)). Therefore, an EIR is not intended to evaluate policy aspects of a proposed project, such as consistency with the Priority Policies adopted as part of Proposition M, the Accountable Planning Initiative, which

Additional height exceptions may be permitted in specific height and bulk districts with variable height limits.

was approved by San Francisco voters in 1986, except insofar as the project's relationship to the Priority Policies may implicate physical effects on the environment. As stated on EIR p. 35, "Prior to issuing a permit for any project that requires an Initial Study under CEQA, and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action that requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. In evaluating *General Plan* consistency of the project and reviewing the building permit application for the proposed project, the Planning Commission and/or Planning Department would make the necessary findings of consistency with the Priority Policies." Consistent with Planning Department and Planning Commission practice, Department staff will prepare a separate staff report concerning consistency with the Priority Policies, as well as the *General Plan* and *Planning Code*—including the requested exceptions as provided for under Section 309—for consideration by the Planning Commission as part of the Commission's deliberation on whether to approve the proposed 350 Mission project. Such deliberation would not occur until the Final EIR is certified, as required by CEQA.

Regarding the granting of exceptions to *Planning Code* requirements under Section 309 for the proposed project, this is a policy decision that is made by the Planning Commission on a case-by-case basis. To the extent that the granting of such exceptions would result in physical impacts, those impacts are analyzed in this EIR. The fact that a project would require one or more exceptions to *Planning Code* requirements does not, in itself, indicate that the project would have a significant physical effect on the environment.

The EIR includes a Code-Complying Bulk Alternative, Alternative B, p. 131. As noted in Section V.B, Significant Environmental Effects that Cannot Be Avoided if the Proposed Project is Implemented, p. 128, the only such significant unavoidable effects of the project relate to construction-period transportation and construction-generated air quality emissions.

Alternative B, the Code-Complying Bulk Alternative, would have similar effects in these two areas, and those impacts would be significant and unavoidable with this alternative, as with the project, as described on EIR p. 133. As the proposed project would have less-than-significant impacts with respect to shadow, wind, and aesthetics, the EIR finds that the Code-Complying Bulk Alternative would also have less-than-significant impacts for these same environmental topics. Because the focus of an EIR's alternatives analysis is intended to be on means of avoiding or reducing significant impacts of the proposed project, further detail in the analysis of these less-than-significant impacts is not required for Alternative B.

## Comment [PP3]

"This DEIR, like most others, just rattles off a short summary of the Prop M Priority Policies without acknowledging that they are POLICIES to be applied in the review of a project. (4) SPECIFICALLY reads as follows: that commuter traffic not impede Muni transit service or overburden our streets.

"A parking garage at this location will impede Muni operations because the cars entering and exiting the garage MUST cross multiple Muni routes. The Planning Code explicitly DISCOURAGES parking in the C-3-O because of those conflicts with transit and pedestrians.

"This is NOT an issue of parking deficit - which the DEIR waves away on p. 44. The analysis is provided only for 'informational purposes.' But where is the INFORMATION? The LOS table on p. 47 shows CUMULATIVE impacts in EVERY intersection in this area - even those currently at B, C, D, E going to level F. This is for both am and pm peak hours. The decision maker should be forced to confront whether ANY new garage that contributes to this level of congestion is acceptable." (Sue C. Hestor)

#### Response

As to the physical environmental effects of the proposed project in the context of Priority Policy 4, "that commuter traffic not impede Muni transit services or overburden our streets or neighborhood parking," the traffic analysis in the EIR, pp. 46 – 49, concludes that the proposed project would not result in any project-specific or cumulative significant effects on operations of nearby intersections. Although the commenter correctly notes that, under cumulative conditions, all study intersections would operate at an unacceptable Level of Service (LOS) F, the analysis determined that the proposed project would not make a considerable contribution to operations at any of the intersections evaluated, because the incremental increase in traffic resulting from the proposed project would not adversely affect the so-called critical movements (those that govern intersection LOS) at any of the study intersections. Thus, traffic impacts of the proposed project would be less than significant. Because traffic impacts would be less than significant, the project would likewise not result in any substantial effect related to disruption or slowing of Muni service. Moreover, as described on EIR pp. 49 – 50, the project would not result in any significant effect on Muni service related to an increase in ridership. The EIR, pp. 50 – 51, does conclude that the proposed project could have a significant effect on p.m. peak-hour Golden Gate Transit service on Fremont Street, because the garage entrance would be located directly across the sidewalk from the Golden Gate Transit bus stop, but mitigation is identified (Mitigation Measure TR-4a, p. 51) to relocate Golden Gate Transit bus stops and thereby reduce this impact to a less-than-significant level. Golden Gate Transit has agreed this measure (see Comment TR2, below).

It is noted that the EIR analyzes a No-Parking Alternative, Alternative C, p. 134. As stated in the description of that alternative, "Trip generation would be the same as with the proposed project, because these calculations are based on development floor area; however, with no on-site parking (except for car-share vehicles), distribution of project trips would be somewhat different than that of the project, because all persons driving to the site would have to park elsewhere. However, like the proposed project, this alternative would not be expected to result in significant traffic impacts, as some vehicle trips would be destined to and from the building in any case, including drivers dropping off passengers (including taxi), delivery vehicles, and certain visitors, and all vehicle trips would be made to the general project vicinity. Therefore, the redistribution of traffic would not be expected to substantially increase volumes at any of the study intersections."

# **Transportation**

# Traffic, Parking, and Circulation

## Comment [TR1]

"The proposed project includes 61 parking spaces. There is no graphic explaining the parking whatsoever. There should be such to draw attention to circulation issues associated with the parking. From the driveway shown on the ground floor plans and from information provided elsewhere in the text, the parking is accessed from north-bound Fremont Street and it exits from the same driveway. So cars will travel north on Fremont to enter the garage and north on Fremont to exit the garage. If they want to head south when they leave, they will have to turn right on Market, then right again on Beale. Or if they are arriving from somewhere other than the south, they will have to lap the same block traveling west on Mission, to turn north on Fremont.

"The decision-maker needs information that leads to an analysis of whether ANY parking should be provided at all in this project. This location is critical to operations of transit service NOW and will be even more important IN THE FUTURE as the transit center is developed. There should be a real explanation of how cars will affect pedestrians because so many cross-walks will be crossed for cars entering or exiting this garage.

"In general there are puny non-explanatory graphics in this DEIR." (Sue C. Hestor)

#### Response

The EIR (pp. 39 – 40) describes Fremont and Beale Streets as one-way streets northbound and southbound, respectively. The EIR project description (p. 5 and p. 6) state that the project's parking garage and loading dock would be accessible via a driveway on Fremont Street; this proposal is illustrated in Figure 2, Ground Floor Plan, EIR p. 8. The traffic analysis accounts for trips both arriving and departing the project and for the circulation patterns engendered by the one-way streets in the project vicinity.

It is noted that the vehicle ramp to the proposed project's parking garage would be approximately 100 feet long, with access control at the base. This ramp would accommodate at least four vehicles that were to arrive almost simultaneously at the garage without interfering with pedestrian traffic on the sidewalk or traffic flow on Fremont Street. According to the transportation analysis, the number of vehicles waiting to enter the garage at any one time would generally be no more than two, meaning that the queue of waiting cars would not reach the sidewalk and would not interfere with pedestrians or traffic on Fremont Street.<sup>6</sup> In terms of vehicles departing the garage, there would be no impact on pedestrian traffic or other traffic from vehicles waiting inside the garage to exit.

Tim Erney, AECOM, e-mail, January 17, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E.

It is also noted that the EIR includes transportation-related mitigation measures that would require posting a garage/loading dock attendant, installation of audible warning devices, and limiting loading dock hours, to reduce to less-than-significant levels potential impacts related to potential conflicts between pedestrians, Golden Gate Transit buses, and vehicles using the proposed parking garage and loading dock via the proposed driveway on Fremont Street (see EIR pp. 52 - 54).

#### **Transit**

### Comment [TR2]

"District staff raised several issues when it recently reviewed the Transportation Impact Study for this project. The District's concerns were shared with San Francisco Planning Department staff in letters dated July 23, 2010, and August 11,2010. It appears that these issues have been addressed in the DEIR.

"District staff hopes that the proposed mitigation measures, especially Mitigation Measures M-TR-4a, M-TR-4b, M-TR-5c, and M-TR-9a will fully address impacts associated with the 350 Mission Street project. The District looks forward to working with the City and project sponsor to make necessary bus stop modifications in the future." (*Ron Downing, GGBHTD*)

#### Response

The comment expresses general concurrence with the EIR's conclusion concerning potential effects on Golden Gate Transit Service and mitigation identified to reduce effects to a less-than-significant level; no response is required.

# Comment [TR3]

"Four SamTrans routes travel in the immediate vicinity of the project: 292, 391, 397 and KX. Currently there are not bus stops located on the Mission Street block between Beale and Fremont Streets; however, this block provides access and egress for these routes into the Transbay Terminal.

"Please ensure you contact Karambir Cheema, Bus Superintendent-North Base, SamTrans at cheemak@samtrans.com or (650) 508-6401, Tim Dumandan at Tdumandan@mvtransit.com, and Silverio Sanchez at Ssanchez@mvtransit.com to coordinate all possible bus service detours during construction.

"Please note that SamTrans Route 397 runs overnight and therefore, the above mentioned contacts should be notified of around-the-clock potential construction impacts to the route." (Hilda Lafebre, SamTrans)

#### Response

The EIR notes, on p. 40, that SamTrans buses serve the project vicinity, and Figure 8 on EIR p. 41 shows that SamTrans service (indicated by the "SM" logo) operates on Mission Street adjacent to the site. The EIR identifies no specific adverse impacts to SamTrans service: Impact TR-3, pp. 49 – 50, states that project transit ridership "would not meaningfully affect capacity utilization on ... SamTrans ... service (with five or fewer net new riders ...). None of the regional carriers' capacity utilization standards would be exceeded with project transit trips."

As discussed under Impact TR-9, EIR pp. 58 – 61, cumulative construction impacts, including project effects and those related to construction of the new Transit Center and other projects proposed in the vicinity, "could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles that could be significant" (EIR p. 59). Mitigation Measure M-TR-9a calls for "the project sponsor and/or construction contractor [to] coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Golden Gate Transit, as well as Muni, AC Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic." Despite implementation of this measure, the EIR conservatively concludes that, "because the timing and nature of cumulative Transit Center construction cannot be known at this time, this impact is conservatively judged to be significant and unavoidable."

The comment concerning notification of SamTrans staff in the event of potential construction-related service disruptions is noted; such notification would be undertaken in connection with the proposed 350 Mission Street project with implementation of Mitigation Measure M-TR-9a, described above.

# Noise

# Comment [NO1]

"The Noise section of the Initial Study excludes any material quantification of vibration associated with potential pile-driving and other high-vibration-inducing activities that could occur during the construction phase of the Project. Therefore, it is difficult to ascertain whether vibration associated with the Project (and other past, present, and foreseeable projects in the area) would result in cosmetic or structural damage to the Adjacent Property, particularly given that Project plans call for only a 6.5 foot setback from the eastern property line. Although Mitigation Measure M-NO-2a provides measures that would reduce vibration-related effects associated with pile driving, it is difficult to determine whether this mitigation measure would be effective in reducing the cumulative vibration-related damage to a less-than-significant level, since the degree of vibration is not identified in the first place.

"In addition, the DEIR does not sufficiently identify mitigation measures, other than for pile driving, to reduce vibration associated with construction activities, which is a significant concern to the Owner. The Owner therefore respectfully requests that further studies and information be provided to identify vibrations that could result from Project construction activities and additional mitigation measures imposed as applicable to reduce vibration associated with construction activities other than pile driving." (Alex DeGood)

#### Response

As stated in the EIR Project Description, p. 17, the proposed project would be constructed atop a mat foundation. The Initial Study noise analysis, p. 44 of Appendix A, states, "As stated in the project description, the project is proposed to be constructed on a mat foundation, and thus pile-

driving would not be required. Should the foundation concept be revised and a pile-supported foundation be proposed, or should pile-driving otherwise be required, noise impacts could be significant." For that reason, the Initial Study includes a mitigation measure to reduce pile-driving noise by the maximum extent feasible, as a precaution in the event of a change in the proposed construction methodology. Pile-driving is not anticipated as of this writing. Other typical construction activities, while they can result in occasional vibration that may be perceptible to nearby observers, do not typically generate ground-borne vibration that can cause damage to buildings other than unreinforced masonry structures, none of which exist in the project vicinity. Therefore, vibration impacts would not be significant.

As stated in the Initial Study, construction noise is regulated by the San Francisco Noise Ordinance, which sets forth that it is "the policy of San Francisco to prohibit unwanted, excessive, and avoidable noise." Construction undertaken consistent with the requirements of the Noise Ordinance would ordinarily be anticipated to further this policy aim. Moreover, with implementation of Mitigation Measure M-NO-2b, Initial Study p. 46, construction noise would be minimized to the maximum extent feasible, and therefore construction noise impacts would be less than significant.

# Air Quality

# Comment [AQ1]

"District staff is impressed with and strongly supports the City's binding and enforceable programs to reduce air pollution from new development in the City, such as the Transit First Policy, LEED Silver building requirements, Zero Waste and the Green Building Ordinance. This Project's attributes to reduce energy use and vehicle trips would help the City reach its greenhouse gas (GHG) reduction goals. For example, consistent with the Transit First Policy, the Project site is located in a dense urban neighborhood with a mix of uses within walking distance, is accessible by local and regional transit services, and its features include providing bicycle parking and associated facilities, limited vehicle parking, three spaces for car share vehicles, and transportation demand management services. In addition, the Project is proposed for LEED Gold certification. Projects like this not only would help the Bay Area move towards reaching the State's AB32 GHG reduction goals, but also will serve as a model for other jurisdictions seeking to reduce GHG emissions and build energy efficient projects.

"While staff supports the above referenced attributes that would serve to reduce long term operational air pollutants from this Project, District staff is concerned about the significant and unavoidable air quality impacts identified in the DEIR that are associated with Project construction emissions. The DEIR concludes that Project construction could expose sensitive receptors to cancer risk and PM2.5 concentrations above BAAQMD's significance thresholds. District staff recommends that the emissions from construction be mitigated to the maximum extent feasible to protect human health and has comments on the proposed mitigation measure.

"Mitigation Measure M-AQ-1. The DEIR states that construction emissions would exceed the District's 2010 CEQA thresholds for cancer and PM2.S risk. Chapter IV page 82 states that if the Project utilized Interim Tier 4 diesel construction equipment exclusively, both the cancer risk and the concentration of

PM2.5 could be reduced to a less-than-significant level, but that these engines are not readily available at this time.

"District staff supports the objective of using the cleanest available construction equipment, and believes it should be a requirement. At the same time, staff realizes that there is uncertainty about when specific types of equipment will be available with Interim Tier 4 engines. Our understanding is that as of year 2011, Interim Tier 4 engines will be available for all off-road equipment, with the exception of equipment engines with 75 to 175 horsepower (hp).

"District staff recommends that Mitigation Measure M-AQ-J be revised to require as a condition of Project approval:

- "Use of Interim Tier 4 or equivalent equipment for all uses where such equipment is available,
- "Use of Tier 3 equipment with Best Available Control Technology (BACT) or alternative fuel vehicles for applications where Tier 4 Interim engines are not available.
- "Prohibition of diesel generators for construction purposes where feasible alternative sources of power are available." (Jean Roggenkamp, BAAQMD)

#### Response

Given the standards in the June 2010 BAAQMD CEQA Guidelines with respect to construction emissions, the EIR finds a significant construction-period air quality impact for the project. As stated on EIR p. 81, the BAAQMD's guide for a screening-level analysis of construction health risk "finds a significant impact due to construction emissions for virtually any project, other than a residential project of five or fewer units, that is within 100 meters (330 feet) of a sensitive receptor," meaning that, in the absence of a project-specific construction risk assessment, many urban infill projects could result in a significant construction-period impact. A project-specific health risk assessment was conducted for the proposed 350 Mission Street project. As noted by the commenter, based on the analysis of diesel and fine particulate (PM2.5) emissions that would be generated during project construction, the EIR stated that the project would result in a significant impact.

It is true that much of the new construction equipment sold beginning in 2011 will be required to meet the Interim Tier 4 emissions standards. However, some Interim Tier 4 equipment will likely not be available until 2012 at the earliest. The fact that new equipment will begin to be available to construction contractors and equipment leasing companies, for example, does not mean that this equipment will be readily available for use on a particular job site. The federal (U.S. EPA) emissions standards that take effect in 2011 do not include any provision for required replacement of existing in-use equipment. Although the California Air Resources Board (CARB) has published regulations concerning the phase-in of new construction equipment to existing fleets, as noted on EIR p. 82, CARB has delayed implementation of some of these new standards, including requirements that construction equipment use so-called Best Available Control Technology or that each operator's fleet of equipment meet a specified average emissions

standard, because of the continuing economic slowdown. Over time, it is clear that construction equipment statewide will produce far fewer emissions than in the past. However, uncertainty over the timing of the availability of the newest (interim Tier 4) construction equipment makes it impractical to single out a particular project for imposition of a specific equipment emissions standard. For this reason, Mitigation Measure M-AQ-1 includes provisions that all construction equipment, diesel trucks, and generators "be equipped with Best Available Control Technology for emission reductions of NOx and PM" and that all contractors "use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines." Additionally, this mitigation measure would require the project sponsor and construction contractor to develop a plan demonstrating that the project would achieve a "project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average." It is noted that these provisions were taken from the BAAQMD's list of "Additional Construction Mitigation Measures for Projects with Construction Emissions Above the Threshold" (Table 8-3, p. 8-5 of the BAAQMD CEQA Guidelines, June 2010).

In recognition of the BAAQMD's comment, the following revisions are made to Mitigation Measure M-AQ-1 (new text is <u>double-underlined</u>; deleted text is shown in <u>strikethrough</u>):

- M-AQ-1 Construction Vehicle Emissions Minimization: To reduce the potential health risk resulting from project construction activities, the project sponsor shall include in contract specifications a requirement for the following BAAQMD-recommended measures:
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (less than the five minutes identified above in Improvement Measure I-AQ-1b);
  - The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include, as the primary option, use of Interim Tier 4 equipment where such equipment is available and feasible for use, the use of other late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available;
  - All construction equipment, diesel trucks, and generators shall be equipped
    with Best Available Control Technology for emission reductions of NOx and
    PM\_including Tier 3 or alternative fuel engines where such equipment is
    available and feasible for use; and
  - All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and
  - The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available.

# Shadow

# Comment [SH1]

"The term 'POPOS' is weird, NOT A NORMAL TERM PEOPLE USE, and disorienting. It is NOT useful, but obscures information. Perhaps this is the author's intent?" (Sue C. Hestor)

#### Response

The comment is noted. Admittedly, the term "POPOS"—an acronym for "privately owned, public [or "publicly accessible"] open space"—is not in "everyday" usage. However, the EIR uses this term, in Section IV.F, Shadow, and like any other acronym in the EIR, the term is defined in footnote 93, p. 113, and the EIR uses the acronym in subsequent references.

# Comment [SH2]

"There are several levels of shadows that are relevant to looking at this project - but graphic information is only provided on one of them. And it is provided in a manner which obscures information and hinders informed decisions.

"Prop K (sec 295) limits go from one hour after sunrise until one hour before sunset. There is no time of the year when 10 am is one hour after sunrise, and no time when 3 pm is one hour before sunset. Yet those are the "representative" times (besides noon) for which shadow information is provided on 116-119. How many people are walking on the street and affected by sunlight at 10 and 3, versus those at 8-9 or 4-5?

"The Planning Code restricts shadows in Sec. 147 on publicly accessible open spaces, spaces other than the Rec Park facilities covered by Prop K. Please provide at least minimal graphics showing how Prop K and Sect 147 shadows fall. Please explain the LEGAL justification for not providing in a readily accessible form - that CAN BE TESTED VIA PUBLIC COMMENT - shadow graphics that illuminate how the project meets/doesn't meet SAN FRANCISCO CODE limits on shadows, which providing them for general impacts. It is unacceptable to state, as in fn 95 that information on impacts on Justin Herman Plaza and Redwood Park is available for review in the files. No one - particularly decision-making Commissioners - has the time to dig that information out. Particularly when the EIR is supposed to provide adequate environmental information." (Sue C. Hestor)

#### Response

The shadow graphics presented in EIR Figures 10 through 13, pp. 116 – 119, depict shadow on the summer solstice (when the sun is highest and shadows are shortest), the winter solstice (when the sun is lowest and shadows are longest), and on the spring and fall equinoxes, which represent midpoints in the sun's apparent travel across the sky. The times depicted – 10:00 a.m., 12:00 noon, and 3:00 p.m., are consistent with long-time Planning Department practice. The primary exception to the foregoing is that it is common for EIRs to show the maximum extent of shadow on an open space protected by *Planning Code* Section 295 (or other important open space, such as Yerba Buena Gardens) — when the project being analyzed would cast shadow on such an open space. In the case of the 350 Mission Street project, no such shadow would be cast on publicly

owned open spaces. As stated on EIR pp. 114 – 115, "Based on the results of computer modeling of shadows, the proposed project would not cast new shadow on Justin Herman Plaza or on any other open space under the jurisdiction of the San Francisco Recreation and Park Commission between one hour after sunrise and one hour before sunset, and therefore the project would comply with *Planning Code* Section 295." As stated on p. 113, "Section 295 prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would shade property under the jurisdiction of or designated to be acquired by the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset, unless the Planning Commission, following review and comment by the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission, determines that such shade would have an insignificant impact on the use of such property." The EIR provides adequate information in text and graphics to fully characterize project shadows.

Concerning Code Section 147, as stated on EIR p. 114, this section "requires that all new development and additions to existing structures where the height exceeds 50 feet must be shaped to minimize shadow on public plazas or other publicly accessible open spaces other than those protected by Section 295, 'in accordance with the guidelines of good design and without unduly restricting the development potential of the property." The EIR, on pp. 115 – 121, provides a detailed analysis of shadow on the privately owned, publicly accessible open spaces, or POPOS, that would be most affected by the proposed project. On p. 120, the EIR states that the project would newly shade a portion of the POPOS immediately north of the project site during late spring and early summer, when sunlight currently exists on the northern portion of this open space for about one hour around 12:00 noon: the project would eliminate this existing partial sunlight on this "east side POPOS." The project would not add new shadow on this open space between 8:00 and 9:00 a.m. or between 4:00 and 5:00 p.m., when existing buildings largely shade this space. As for the "west side POPOS," across Fremont Street and north of the project site, the EIR states (p. 121) that the project would add new shadow to this open space between about 9:30 and 10:30 a.m., also in late spring and early summer, eliminating partial sunlight on this open space at this time. The project would not add any shadow on this open space between 8:00 and 9:00 a.m. or between 4:00 and 5:00 p.m., when existing buildings also largely shade this space.

The EIR concludes, on p. 121, that net new project shadow "would be of limited duration and would occur at each of the open spaces noted over only a few weeks of the year, for up to about 90 minutes per day, in late spring and early summer ... [and] would not affect the available afternoon sunlight on [the] benches [in the POPOS adjacent to the project site]. Because of the limited duration and extent, these shadows would not be expected to substantially adversely affect use of the open spaces. Therefore, the project effect relative to shading of publicly accessible open spaces not under the control of the Recreation and Park Department would be less than significant."

The analysis showing no impact on Justin Herman Plaza, which is referenced in footnote 95 on EIR p. 115, is merely a spreadsheet that presents the quantitative results of a calculation of net

new project shadow on Justin Herman Plaza. The spreadsheet is generated by a computer program that calculates shadow at 15-minute intervals, one day per week, throughout six months of the year (during the other six months, the sun's path is essentially a mirror image of these months). The calculations are then multiplied by a factor that results in a yearly total of shadow-foot-hours<sup>7</sup> on the particular open space under analysis. The result for Justin Herman Plaza was 0.00, confirming that the proposed project would cast no new shadow on this open space during hours covered by Section 295.

#### Comment [SH3]

"Re open spaces/parks to be created in the near future (p. 113-121), HOW does Planning KNOW that none of those will be part of the Rec Park system?" (Sue C. Hestor)

#### Response

Section 295 applies to "property designated for acquisition by the Recreation and Park Commission." A property "designated for acquisition ... shall mean property which a majority of each of the Recreation and Park Commission and the City Planning Commission, meeting jointly, with the concurrence of the Board of Supervisors, have recommended for acquisition from the Open Space Acquisition and Park Renovation Fund ...." Based on information available to the Planning Department, none of the public open spaces planned as part of the Transit Center District Plan, such as the City Park atop the Transit Center, Mission Square adjacent to and east of the proposed Transit Tower, or the Second & Howard Plaza at the northeast corner of this intersection, are planned to be placed under the jurisdiction of the Recreation and Park Commission. Likewise, the open spaces planned within the adopted Transbay Redevelopment Plan—Oscar Park on Clementina Street, Transbay Park between Main, Beale, Tehama and Clementina Streets, and Essex Street Park, are not planned to be placed under the jurisdiction of the Recreation and Park Commission. None of these planned open spaces is currently designated for acquisition by the Recreation and Park Commission, which is the standard for the application of *Planning Code* Section 295.

It is noted that within the Rincon Hill Plan area farther south, a mini-park planned on Guy Place will be under Recreation and Park Commission jurisdiction. This park will be subject to Section 295, but would not be affected by shadow cast by the proposed project or by any building in the proposed Transit Center District Plan area.

# Comment [SH4]

"The list and height of 'cumulative' projects seems to assume that the limits of Prop K can be violated. Please explain." (Sue C. Hestor)

One "shadow-foot-hour" is the equivalent of shadow covering one square foot of ground for one hour.

#### Response

The comment refers to the analysis on EIR pp. 121 – 122, concerning potential shadow effects of projects described on pp. 19 -20, proposed in the project vicinity – mostly in the area proposed for the Transit Center District Plan. The analysis is undertaken consistent with the direction in Section 15355(b) of the state CEQA Guidelines, that "reasonably foreseeable probable future projects" be included in the cumulative analysis. While it is true that a number of the projects proposed in the project vicinity are proposed to be built at heights greater than currently permitted, these projects are consistent, for the most part, with the increased height limits proposed as part of the Transit Center District Plan. Therefore, for purposes of a conservative analysis, potential shadow effects of these cumulative projects are disclosed on pp. 121 – 122, where it is stated that "some of these proposed and planned buildings, including the Transit Tower, would cast shadow on parks protected by Section 295 of the *Planning Code*, as well as on the proposed elevated City Park atop the Transit Center (replacement for the Transbay Terminal). New shadow from these proposed buildings could potentially result in a significant impact. However, inasmuch as the proposed 350 Mission Street project would not add new shadow to any Recreation and Park Department properties or to the City Park or Mission Square, nor would it substantially interfere with the use of existing POPOS, the proposed project would not make a considerable contribution to potential future shadow effects."

## **Alternatives**

## Comment [ALT1]

"A further concern relates to the fact that the DEIR does not sufficiently explain why a code-complying bulk alternative would not be an Environmentally Superior Alternative to the Project. For example, increased shadow impacts on the Adjacent Property as a result of setback and bulk exceptions may increase the Adjacent Property's heating costs and related electricity usage, resulting in increased greenhouse gas emissions.

"Additional information is hereby requested, which may include new or revised figures and photo simulations, that demonstrate either that (1) the Project's non-compliant bulk will not cause adverse effects on surrounding properties or (2) a code-complying bulk alternative would reduce and/or eliminate these impacts. Absent a more thorough analysis of a code-complying bulk alternative, the DEIR does not illustrate how such an alternative could mitigate the undisclosed effects associated with the Project's setback and bulk exceptions. The Owner is concerned that the DEIR presents the bulk and setback exceptions as a fait accompli, stating them as fact without connecting their supposed necessity to the Project's overall goals and objectives." (Alex DeGood)

#### Response

As stated on EIR p. 114, the significance criteria for shadow effects are whether a project would adversely affect the use of parks, open space, outdoor recreation facilities, or other public areas. Shadow effects on private property are not typically considered adverse effects for CEQA purposes, for the reasons discussed in the response to Comment PP-1, p. C&R-5 (effects under

CEQA are generally those that would be readily apparent to the general public, as opposed to effects on individuals such as tenants in or owners of an adjacent building). As also described in that response, the EIR does not identify significant impacts of the proposed project with respect to shadow, wind, or aesthetics. Therefore, no analysis of alternative(s) that would reduce these impacts is required.

Concerning the project's potential for shading the adjacent office building and, in turn, resulting in increased greenhouse gas (GHG) emissions from increased burning of fossil fuel for heating and electricity, it would be speculative to attempt this detailed level of calculation in an EIR. Such an analysis could include an energy audit of the existing building, including an evaluation of the solar transmission capacity of the windows to determine the amount of sunlight energy that is transmitted into the building, as well as examination of the building's heating, ventilation, and air conditioning (HVAC) system. In general, however, most modern office buildings with sealed windows and insulation expend more energy on cooling than on heating. Moreover, to the extent that building heating is required in San Francisco's relatively mild climate, it is more during nighttime hours (which are limited in terms of an office building's hours of operation). By obstructing direct sunlight that currently falls on the adjacent 50 Beale Street building, the proposed project clearly would eliminate some solar radiation, which could result in incremental cooling and heating of the adjacent building, depending on season and time of day. However, it would be anticipated that the net change would be relatively minimal, and would not approach the threshold of a significant impact.

It is also noted that, in August 2010, the Planning Department has prepared a document entitled Strategies to Address Greenhouse Gas Emissions, which presents a comprehensive assessment of policies, programs and ordinances that collectively represent San Francisco's Qualified Greenhouse Gas Reduction Strategy in compliance with the Bay Area Air Quality Management District (BAAQMD)'s 2010 CEQA Air Quality Guidelines and thresholds of significance. The GHG strategy document identifies a number of mandatory requirements and incentives that have measurably reduced greenhouse gas emissions including, but not limited to, increasing the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of a green building strategy, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City's transportation fleet (including buses and taxis), and a mandatory composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions. The City's 2017 and 2025 GHG reduction goals are more aggressive than the State's GHG reduction goals as outlined in Assembly Bill 32, and consistent with the State's long-term (2050) GHG reduction goals. The GHG strategy document concludes that San Francisco's policies have resulted in a reduction in greenhouse gas emissions below 1990 levels, meeting statewide AB 32 GHG reduction goals. As reported, San Francisco's 1990 GHG emissions were approximately 8.26 million metric tons (MMT) CO2E and 2005 GHG emissions are estimated at 7.82 MMTCO2E, representing an approximately 5.3 percent reduction in GHG emissions below 1990 levels. The BAAOMD

reviewed San Francisco's *Strategies to Address Greenhouse Gas Emissions* and concluded that the strategy meets the criteria for a Qualified GHG Reduction Strategy as outlined in BAAQMD's CEQA Guidelines and stated that San Francisco's "aggressive GHG reduction targets and comprehensive strategies help the Bay Area move toward reaching the State's AB 32 goals, and also serve as a model from which other communities can learn."

#### Comment [ALT2]

"The alternatives have been manipulated so that the project with NO Parking still has the same massing, and exceptions, as a project that complies with the bulk limits of the Code. They should be merged - a code complying alternative with NO PARKING." (Sue C. Hestor)

#### Response

Section 15126.6 of the State CEQA Guidelines directs that alternatives analyzed in an EIR "avoid or substantially lessen any of the significant effects of the project" while, at the same time, "feasibly attain[ing] most of the basic objectives of the project." As described in the EIR (pp. 128 – 129), the only impacts that could not be mitigated to a less-than-significant level are those related to cumulative construction-period transportation effects (largely attributable to construction of the new Transit Center) and construction-period air quality impacts. Because these impacts, as conservatively evaluated in the EIR, would occur with any meaningful level of development on the project site (i.e., demolition of the existing building and construction of a new building), neither impact could be reduced to a less-than-significant level, except by not building the project, which would not attain most of the project's "basic objectives." Even a sizable reduction in development, such as developing a building half the size of the proposed project, would not avoid these significant impacts.

As required, the EIR includes analysis of a No Project Alternative. Because only the No Project Alternative would not result in the proposed project's significant, unavoidable impacts, CEQA does not require analysis of additional alternatives that likewise would not reduce the project's impacts to a less-than-significant level. Having noted this, however, it can be stated that an alternative such as is suggested by the commenter—Compliance With Planning Code Bulk Limits with No On-Site Parking—would result in the same significant, unmitigable impacts related to construction-period transportation and construction-period air quality emissions as would the proposed project. Such an alternative would not be expected to result in any new significant impacts or any substantially more severe impacts than would the proposed project. An alternative such as that suggested by the commenter could be considered and approved by the decision-makers.

The alternative suggested by the commenter, like the No-Parking Alternative included in the EIR (Alternative C), would avoid significant but mitigable effect related to potential conflicts between pedestrians, Golden Gate Transit buses, and vehicles using the parking garage, because this alternative would have no garage, and thus would avoid the need for a mitigation measure involving relocation of Golden Gate Transit bus stops. This is discussed on EIR p. 134 with

respect to Alternative C; it is also noted there that, assuming off-street loading is provided, "this alternative would result in the same impacts as would the proposed project with respect to potential conflicts between pedestrians and vehicles using the proposed loading dock via the proposed driveway on Fremont Street. As with the proposed project, however, this impact would be mitigated by posting a loading dock attendant and limiting loading dock hours. It is also assumed that, with no garage, the loading dock, driveway, and ramps could be re-sized to allow use of the loading dock by larger trucks, thereby avoiding the project's significant but mitigable impact with respect to oversize trucks." The foregoing would be anticipated to hold true as well for the commenter's suggested alternative, Compliance With Planning Code Bulk Limits with No On-Site Parking.

## Topics Analyzed in the Initial Study

## Population and Housing

#### Comment [PH1]

"Housing assumptions (p.123) - the cavalier assumption that because the lower-income work force cannot afford San Francisco housing and that such is okay is unnerving. Please discuss the HOUSING goals - by affordability level - in the SF Housing Element. It is really so boring that we are consciously increasing income disparities in San Francisco? Is becoming a higher income city consistent with CITY policies. I refer you to the first two statements of policy of Prop M in its preamble:

"It is the policy of the People of San Francisco that the amount and pace of commercial office development be limited so that: THE IMPACT OF COMMERCIAL OFFICE DEVELOPMENT WILL NOT OVERWHELM OUR CITY'S TRANSIT, TRAFFIC AND PARKING CAPACITY, HOUSING CAPACITY AND AFFORDABILITY, AND NEIGHBORHOOD CHARACTER; and OUR CITY WILL REMAIN AFFORDABLE FOR THOSE LIVING AND WORKING IN IT.

"Part of the neighborhood character of San Francisco is NOT being only or even predominantly upper income residents." (Sue C. Hestor)

#### Response

The statements on pp. 123 – 124 of the EIR concerning population and housing are not intended as an attempt to state that it is "okay" that housing in San Francisco is unaffordable to a large percentage of workers. Rather, the explanation on p. 124 regarding the unlikelihood of a person relocating to housing in San Francisco unless they can afford this housing is simply stating a reasonable economic assumption concerning demand for housing in the City. Questions concerning the wage levels for various occupations and the cost of housing in San Francisco are fundamentally economic concerns that are beyond the scope of CEQA analysis. Implementation of the policies contained in Housing Element with respect to housing affordability is separate from the implementation of CEQA, and beyond the scope of this EIR. It is noted that the foregoing discussion was presented in Section IV.G. of the EIR, which provided amplification of

the Initial Study discussion (EIR Appendix A) in response to comments made on the project's Notice of Preparation.

## **Recreation and Public Space**

#### Comment [RE1]

"As described in the DEIR, the Project would include 6,960 square feet of enclosed public open space. According to page 6, the proposed enclosed lobby and public seating areas would be considered an 'indoor park'; however, the Draft EIR does not sufficiently describe how the proposed open space meets the requirements listed in the Plan's Guidelines for Downtown Open Space.

"Examples of information absent from the DEIR and necessary to determine if the proposed on-site open space would meet City requirements (and would not result in significant effects) include, but are not limited to: (1) the adequacy of proposed seating and moveable chairs; (2) the location of food service seating and open space seating; (3) the park's availability to the public (including hours of operation); (4) the transparency of the lobby/mezzanine walls; and (5) specifics on additional design features (i.e., sculptural or water features). Absent more detail regarding the proposed open space, the Owner is unable to determine whether the space represents a cohesive design that will properly integrate with nearby outdoor public spaces." (Alex DeGood)

#### Response

CEQA requires an evaluation of the proposed project's effects on the physical environment, including whether the project would increase the use of existing parks and recreational facilities such that these facilities would deteriorate, whether the project would degrade existing recreational facilities, or whether the project's own recreational facilities would result in an adverse effect on the environment. In this context, the Initial Study (EIR Appendix A, pp. 52 - 53) concludes that the additional daytime population resulting from the proposed project would not be sufficient to result in an adverse physical impact on existing parks and recreational facilities.

As described in both the Initial Study (pp. 3-7) and the EIR (pp. 11, 12 [Table 1], and 32), the project would include on-site open space in excess of that required by the *Planning Code*, which implements the open space provisions of the Downtown Plan. As stated on EIR p. 6, "the enclosed lobby and public seating areas would be considered an 'indoor park'" for purposes of the *Planning Code* open space requirement. As stated in footnote 4 on p. 11 of the EIR, "The Downtown Plan (Table 1, Guidelines for Downtown Open Space) states that an Indoor Park should have, among other qualities, at least one street-facing glass wall and be accessible from street level; contain at least 1,000 sq. ft. and be at least 20 feet tall; provide food service and adequate seating, sunlight, and ventilation; and include design features." As stated on EIR p. 13, "The combined ground floor and mezzanine levels would be the project's primary distinguishing feature in terms of articulation and materials. In particular, at the corner of Mission and Fremont Streets, the ground floor and mezzanine, together, would serve as an approximately 50-foot-tall atrium, accessible via doors on Mission and Fremont Streets, and through a folding glass-panel door system, also on both facades near the corner of Mission and Fremont Streets. Large portions

of the atrium would be open to the sidewalk in good weather, as the folding panel doors would remain open, providing pedestrian access along almost 75 feet of sidewalk frontage. Publicly accessible open space would be located on both the ground floor and mezzanine, and the atrium would have large expanses of clear glass." In terms of open space, as indicated on EIR p. 11, "The ground floor lobby, stairway, and adjacent exterior open space (mezzanine terrace) would contribute approximately 4,755 square feet of open space. On the mezzanine, at the top of the stairway, the project would provide a public seating area of approximately 2,205 square feet." (This seating area is immediately to the left of the space labeled as "Restaurant" in Figure 3, Mezzanine (Second Floor) Plan, EIR p. 9.) Thus, the total on-site open space would be 6,960 square feet. As stated on EIR p. 6, the project's ground floor would include "a small coffee bar/café near the northwest corner of the ground-floor lobby" (shown beneath the stairway in Figure 2, p. 8). Thus, the project's open space would meet the requirements for an Indoor Park with regard to glazing, accessibility, size, height, food service, and seating. More detailed evaluation of the usability of project's proposed on-site open space is beyond the scope of an EIR; for example, the specific nature of design features, including sculpture(s) and/or fountain(s) and the location and number of chairs could be changeable and therefore would not be part of the permanent physical environment, unlike the indoor space itself. In terms of hours of operation, Planning Code Section 138(d)(8) requires publicly accessible open space to be "open to the public at times when it is reasonable to expect substantial public use." The project would comply with this requirement, which, in practice, typically results in privately owned, publicly accessible indoor open spaces being open to the public between the approximate hours of 8:00 a.m. and 6:00 p.m.

## **Hydrology and Water Quality**

#### Comment [HY1]

"Sea Level Rise - on p. 126 issues raised re[garding] sea level rise are basically pooh-poohed. What is the effect of the extra excavation for a level of parking. Excavation into a rising water table. Is this not one justification for electing an alternative which does NOT include extra excavation for the parking? In the Initial Study - pp 63-65 (but not in the main text) - it is explained that this site was historically part of the Bay, and it has been filled over Bay Mud which 50 feet below grade. This site is subject to liquefaction.

"How is sea level rise on bay fill site, subject to liquefaction, not worthy of discussion in the DEIR text?" (Sue C. Hestor)

#### Response

As stated on pp. 125 - 126 of the EIR,<sup>8</sup> analysis undertaken to date by the Bay Conservation and Development Commission indicates that the project site is not within an area subject to inundation due to sea level rise. As noted on EIR p. 5, the project site is at an elevation of 3 feet,

This discussion was presented in Section IV.G. of the EIR, which provided amplification of the Initial Study discussion (EIR Appendix A) in response to comments made on the project's Notice of Preparation.

San Francisco Datum. This represents an elevation of almost 15 feet above mean sea level based on the current 1988 North American Vertical Datum (which is used, for example, in U.S. Geological Survey maps).

Excavation into the subsurface water table is not uncommon in downtown San Francisco, and this requires that areas of the basement that extend below the water table be waterproofed to keep the interior dry. Concerning effects of proposed excavation on the water table, the area and volume of excavation would be so infinitesimally small, compared to the volume of water in the subsurface water table that excavation and placement of the project basement underground would not result in a discernible effect on the groundwater level.

Regarding liquefaction, the Initial Study (p. 64 of Appendix A) states, "The geotechnical investigation found that the sandy fill and Bay Mud underlying the site are susceptible to liquefaction, and could result in ground settlement of as much as 3 inches following a major earthquake. However, because the proposed project would excavate most of the liquefiable soils beneath the project site, the report concluded that 'liquefaction induced settlement will be negligible below foundation level.'"

It is noted that the analyses in the Initial Study are part of the EIR; a topic that is analyzed in the Initial Study and found to result in less-than-significant impacts is not thereby excluded from the EIR.

## D. Staff-Initiated Text Changes

The following changes to the text of the Draft EIR are made in response to comments on the DEIR or are included to clarify the DEIR text. In each change, new language is <u>double underlined</u>, while deleted text is shown in <u>strikethrough</u>.

On page S-2, the second bullet under Planning Commission approvals (variance for driveway width) is deleted and the following is added prior to the heading "Department of Building Inspection":

#### **Zoning Administrator**

• <u>Variance from the maximum driveway width, per *Planning Code* Section 155(s)(5)(A), of 27 feet.</u>

On page 22, the same change as noted above is made in connection with the variance for driveway width.

On page 25, the following text is added following the last paragraph in response to a comment concerning project consistency with the Downtown Plan:

<u>Policy 13.2 Foster sculpturing of building form to create less overpowering buildings and more interesting building tops, particularly the tops of towers.</u>

<u>Policy 13.4 Maintain separation between buildings to preserve light and air and prevent excessive bulk.</u>

As also noted, the proposed project would require an exception from the requirement of *Planning Code* Section 132.1(c) with respect to separation of towers, and from the requirement of Section 270(d) with respect to the bulk of the upper tower. Although the project would require the foregoing exceptions, the physical effects of the setback and bulk exceptions that would be required for the project are analyzed in relevant sections of this EIR, including Section IV.E, Wind, and Section IV.F, Shadow, as well as Section E.2, Aesthetics, of the Initial Study, EIR Appendix A. No significant effects were identified with respect to wind, shadow, aesthetics, or other topics potentially affected by the proposed setback in the EIR.

On pages 82 – 83, Mitigation Measure M-AQ-1 is revised as follows to incorporate recommendations from the Bay Area Air Quality Management District:

- M-AQ-1 Construction Vehicle Emissions Minimization: To reduce the potential health risk resulting from project construction activities, the project sponsor shall include in contract specifications a requirement for the following BAAQMD-recommended measures:
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (less than the five minutes identified above in Improvement Measure I-AQ-1b);
  - The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include, as the primary option,

use of Interim Tier 4 equipment where such equipment is available and feasible for use, the use of other late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available;

- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM<sub>2</sub> <u>including Tier 3 or alternative fuel engines where such equipment is available and</u> <u>feasible for use</u>; and
- All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and
- The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available.

## **Attachment 1: Comment Letters**



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SONOMA COUNTY Shirlee Zane Pamela Torliatt

Jack P. Broadbent EXECUTIVE OFFICER/APCO November 2, 2010

4159288560

Bill Wycko Environmental Review Officer San Francisco Planning Department 1650 Mission Street, Suite 400 San Francisco, CA 94103

Subject: 350 Mission Street Office Project Draft Environmental Impact Report

Dear Mr. Wycko:

Bay Area Air Quality Management District (District) staff reviewed your agency's Draft Environmental Impact Report (DEIR) for the 350 Mission Street Office Project (Project). The proposed Project would include demolition of an existing four-story office building and the construction of a 24-story building with 356,000 square feet (sq. ft.) of office use, 6,600 sq. ft. of retail and restaurant use, and 6,960 sq. ft. of publicly accessible indoor open space.

District staff is impressed with and strongly supports the City's binding and enforceable programs to reduce air pollution from new development in the City, such as the Transit First Policy, LEED Silver building requirements, Zero Waste and the Green Building Ordinance. This Project's attributes to reduce energy use and vehicle trips would help the City reach its greenhouse gas (GHG) reduction goals. For example, consistent with the Transit First Policy, the Project site is located in a dense urban neighborhood with a mix of uses within walking distance, is accessible by local and regional transit services, and its features include providing bicycle parking and associated facilities, limited vehicle parking, three spaces for car share vehicles, and transportation demand management services. In addition, the Project is proposed for LEED Gold certification. Projects like this not only would help the Bay Area move towards reaching the State's AB32 GHG reduction goals, but also will serve as a model for other jurisdictions seeking to reduce GHG emissions and build energy efficient projects.

While staff supports the above referenced attributes that would serve to reduce long term operational air pollutants from this Project, District staff is concerned about the significant and unavoidable air quality impacts identified in the DEIR that are associated with Project construction emissions. The DEIR concludes that Project construction could expose sensitive receptors to cancer risk and PM2.5 concentrations above BAAQMD's significance thresholds. District staff recommends that the emissions from construction be mitigated to the maximum extent feasible to protect human health and has comments on the proposed mitigation measure.

#### Mitigation Measure M-AQ-1

The DEIR states that construction emissions would exceed the District's 2010 CEQA thresholds for cancer and PM2.5 risk. Chapter IV page 82 states that if the Project utilized Interim Tier 4 diesel construction equipment exclusively, both the cancer risk and the concentration of PM2.5 could be reduced to a less-than-significant level, but that these engines are not readily available at this time.

Spare the Air

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AQ<sub>1</sub>

Mr. Bill Wycko

November 2, 2010

District staff supports the objective of using the cleanest available construction equipment, and believes it should be a requirement. At the same time, staff realizes that there is uncertainty about when specific types of equipment will be available with Interim Tier 4 engines. Our understanding is that as of year 2011, Interim Tier 4 engines will be available for all off-road equipment, with the exception of equipment engines with 75 to 175 horsepower (hp).

District staff recommends that Mitigation Measure M-AQ-1 be revised to require as a condition of Project approval:

AQ1 cont.

- Use of Interim Tier 4 or equivalent equipment for all uses where such equipment is available.
- Use of Tier 3 equipment with Best Available Control Technology (BACT) or alternative fuel vehicles for applications where Tier 4 Interim engines are not available.
- Prohibition of diesel generators for construction purposes where feasible alternative sources of power are available.

To determine if any permits are needed for potential new stationary source equipment, please visit the District's permits webpage at <a href="http://www.baaqind.gov/Divisions/Engineering/Application-Forms.aspx">http://www.baaqind.gov/Divisions/Engineering/Application-Forms.aspx</a> or contact engineering staff at 415-749-4990.

District staff is available to assist the City in addressing these comments. If you have any questions, please contact Alison Kirk, Senior Environmental Planner, at (415) 749-5169.

Sincerely,

Jean Roggenkamp ()
Deputy Air Pollution Control Officer

cc: BAAQMD Director Chris Daly
BAAQMD Director Eric Mar
BAAQMD Director Gavin Newsom

## RECEIVED

OCT 13 2010

CITY & COUNTY OF S.F.

October 7, 2010



TR<sub>2</sub>

Mr. Bill Wycko, Environmental Review Officer San Francisco Planning Department 1650 Mission Street, Suite 400 San Francisco, CA 94103

Re: 350 Mission Street Draft Environmental Impact Report Comments

Dear Mr. Wycko:

Golden Gate Bridge, Highway and Transportation District (District) staff has reviewed the 350 Mission Street Draft Environmental Impact Report (DEIR) and offers the following comments:

- District staff raised several issues when it recently reviewed the Transportation Impact Study for this project. The District's concerns were shared with San Francisco Planning Department staff in letters dated July 23, 2010, and August 11, 2010. It appears that these issues have been addressed in the DEIR.
- District staff hopes that the proposed mitigation measures, especially Mitigation Measures M-TR-4a, M-TR-4b, M-TR-5c, and M-TR-9a will fully address impacts associated with the 350 Mission Street project. The District looks forward to working with the City and project sponsor to make necessary bus stop modifications in the future.

Thank you for providing the District with the opportunity to submit comments on the 350 Mission Street DEIR. You may contact David Davenport, Associate Planner, at 415.257.4546 if you have any questions regarding these comments.

Sincerely,

Ron Downing

Director of Planning

c: David Davenport Maurice Palumbo Coach Stop 57 File



## RECEIVED

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October 26, 2010

OCT 2 8 2010

Bill Wycko Environmental Review Officer San Francisco Planning Department 1650 Mission Street, Suite 400 San Francisco, CA 94103

CITY & COUNTY OF S.F

RE: Availability of Draft Environmental Impact Report for 350 Mission Street Office Project; SCH No. 2010062103

Dear Mr. Wycko,

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the 350 Mission Street Office Project. We respectfully submit the following comments:

- Four SamTrans routes travel in the immediate vicinity of the project: 292, 391, 397 and KX. Currently there are not bus stops located on the Mission Street block between Beale and Freemont Streets; however, this block provides access and egress for these routes into the Transbay Terminal.
- Please ensure you contact Karambir Cheema, Bus Superintendent-North Base, SamTrans at <a href="mailto:cheemak@samtrans.com">cheemak@samtrans.com</a> or (650) 508-6401, Tim Dumandan at <a href="mailto:Tdumandan@mvtransit.com">Tdumandan@mvtransit.com</a>, and Silverio Sanchez at <a href="mailto:Ssanchez@mvtransit.com">Ssanchez@mvtransit.com</a> to coordinate all possible bus service detours during construction.

 Please note that SamTrans Route 397 runs overnight and therefore, the above mentioned contacts should be notified of around-the-clock potential construction impacts to the route.

Thank you again for the opportunity to provide input. If you have any question regarding these comments, please contact Stacy Cocke, Senior Planner, at (650) 508 – 6207 or via email at cockes@samtrans.com.

Sincerely

Hilda Lafebre, D

Manager, Capital Projects & Environmental Planning

Cc: Marisa Espinosa, Manager, Planning & Research
Marian Lee, Executive Officer, Planning & Development

SAN MATEO COUNTY TRANSIT DISTRICT

1250 San Carlos Ave. – P.O. Box 3006 San Carlos, CA 94070-1306 (650)508-6200 TR3

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Ref: 71498-0001

November 2, 2010

#### VIA EMAIL

Mr. Brett Bollinger San Francisco Planning Department 1650 Mission Street, Suite 400 San Francisco, CA 94103

Re:

350 Mission Street - Draft EIR

Dear Mr. Bollinger:

This office represents 50 Beale Street Property LLC, the owner ("Owner") of the real property located at 50 Beale Street (the "Adjacent Property"). The Adjacent Property is immediately northeast of the above-referenced proposed redevelopment project (the "Project"). Pursuant to the Planning Department's ("Department") circulation of the Project's draft environmental impact report ("DEIR") and related Initial Study, we submit the following comments for the Department's consideration.

The Owner believes that the Project has the potential to serve as a positive redevelopment opportunity at 350 Mission Street. However, the Owner has concerns that the Project as currently configured will create certain impacts on the Adjacent Property, and that adequate information has not been provided in the DEIR to enable proper analysis of the Project. The Owner therefore urges correction of the deficiencies in the DEIR identified below so that it may better understand the scope and impact of the Project on the Adjacent Property, and encourages the Department to consider certain Project changes that would lessen the impact on surrounding properties, including the Adjacent Property.

#### I. BULK AND FOOTPRINT

The DEIR provides minimal analysis or discussion with respect to the Project's non-conforming tower setback and bulk exceptions to the requirements of Planning Code sections 132.1(c) and 270, other than to merely state that such exceptions will be required. As noted in the DEIR, the Project will encroach significantly into the required 15 foot setback up to 300 feet and the required 21 foot setback from 300 to 375 feet on the east property line against the Adjacent Property. This would result in a very narrow separation of approximately only 12.5 feet between the Project and the Adjacent Property, rather than the 21 feet that would result from a code compliant project (and 27 feet above 300 feet in height).

PP<sub>1</sub>

Brett Bollinger November 2, 2010 Page 2

In addition, this massing appears to be inconsistent with Downtown Plan ("Plan") Policy 13.4, which requires separation between buildings to preserve light and air and to prevent excessive bulk. The DEIR does not address this apparent inconsistency between the Plan and proposed massing plan. As the Project does not appear to be in compliance with the Plan, the DEIR does not provide sufficient information to demonstrate that there would be no adverse effects associated with the Project's tower setback and bulk exceptions.

PP1 cont.

ALT1

#### II. PROJECT ALTERNATIVES

A further concern relates to the fact that the DEIR does not sufficiently explain why a code-complying bulk alternative would not be an Environmentally Superior Alternative to the Project. For example, increased shadow impacts on the Adjacent Property as a result of setback and bulk exceptions may increase the Adjacent Property's heating costs and related electricity usage, resulting in increased greenhouse gas emissions.

Additional information is hereby requested, which may include new or revised figures and photo simulations, that demonstrate either that (1) the Project's non-compliant bulk will not cause adverse effects on surrounding properties or (2) a code-complying bulk alternative would reduce and/or eliminate these impacts. Absent a more thorough analysis of a code-complying bulk alternative, the DEIR does not illustrate how such an alternative could mitigate the undisclosed effects associated with the Project's setback and bulk exceptions. The Owner is concerned that the DEIR presents the bulk and setback exceptions as a fait accompli, stating them as fact without connecting their supposed necessity to the Project's overall goals and objectives.

III. OPEN SPACE

As described in the DEIR, the Project would include 6,960 square feet of enclosed public open space. According to page 6, the proposed enclosed lobby and public seating areas would be considered an "indoor park"; however, the Draft EIR does not sufficiently describe how the proposed open space meets the requirements listed in the Plan's Guidelines for Downtown Open Space.

Examples of information absent from the DEIR and necessary to determine if the proposed on-site open space would meet City requirements (and would not result in significant effects) include, but are not limited to: (1) the adequacy of proposed seating and moveable chairs; (2) the location of food service seating and open space seating; (3) the park's availability to the public (including hours of operation); (4) the transparency of the lobby/mezzanine walls; and (5) specifics on additional design features (i.e., sculptural or water features). Absent more detail regarding the proposed open space, the Owner is unable to determine whether the space represents a cohesive design that will properly integrate with nearby outdoor public spaces.

RE1

#### IV. CONSTRUCTION NOISE AND VIBRATION

The Noise section of the Initial Study excludes any material quantification of vibration associated with potential pile-driving and other high-vibration-inducing activities that could occur during the construction phase of the Project. Therefore, it is difficult to ascertain whether vibration associated with the Project (and other past, present, and foreseeable projects in the area) would result in cosmetic or structural damage to the Adjacent Property, particularly given that Project plans call for only a 6.5 foot setback from the eastern property line. Although Mitigation Measure M-NO-2a provides measures that would reduce vibration-related effects associated with pile driving, it is difficult to determine whether this mitigation measure would be effective in reducing the cumulative vibration-related damage to a less-than-significant level, since the degree of vibration is not identified in the first place.

NO<sub>1</sub>

In addition, the DEIR does not sufficiently identify mitigation measures, other than for pile driving, to reduce vibration associated with construction activities, which is a significant concern to the Owner. The Owner therefore respectfully requestes that further studies and information be provided to identify vibrations that could result from Project construction activities and additional mitigation measures imposed as applicable to reduce vibration associated with construction activities other than pile driving.

#### V. CONCLUSION

As noted previously, while the redevelopment of 350 Mission has the potential to positively impact the area, the DEIR (in its current form) does not provide sufficient information or analysis regarding several facets of the Project and their potential to cause adverse impacts on the Adjacent Property and its surroundings. The Owner respectively requests and encourages additional detail, analysis and explanations regarding these potential impacts, including a more thorough examination of a code-complying bulk alternative.

Sincerely,

ALEX DEGOOD of

Jeffer Mangels Butler & Mitchell LLP

cc: Benjamin M. Reznik

#### SUE C. HESTOR

Attorney at Law

870 Market Street, Suite 1128 · San Francisco, CA 94102 (415) 362-2778 · FAX (415) 362-8048

November 2, 2010

Brett Bollinger
Major Environmental Analysis
1650 Mission Street 4<sup>th</sup> fl
San Francisco CA 94103

RE: 2006.1524E 350 Mission Street DEIR

Dear Mr. Bollinger:

San Franciscans for Reasonable Growth submits the following comments on the 350 Mission Street DEIR.

#### Lack of explanation of circulation associated with parking.

The proposed project includes 61 parking spaces. There is <u>no graphic</u> explaining the parking whatsoever. There should be such to draw attention to circulation issues associated with the parking. From the driveway shown on the ground floor plans and from information provided elsewhere in the text, the parking is accessed from north-bound Fremont Street and it exits from the same driveway. So cars will travel north on Fremont to enter the garage and north on Fremont to exit the garage. If they want to head south when they leave, they will have to turn right on Market, then right again on Beale. Or if they are arriving from somewhere other than the south, they will have to lap the same block traveling west on Mission, to turn north on Fremont.

TR<sub>1</sub>

The decision-maker needs information that leads to an analysis of whether ANY parking should be provided at all in this project. This location is critical to operations of transit service NOW and will be even more important IN THE FUTURE as the transit center is developed. There should be a real explanation of how cars will affect pedestrians because so many cross-walks will be crossed for cars entering or exiting this garage.

In general there are puny non-explanatory graphics in this DEIR.

#### Lack of analysis of exceptions.

Once again a developer wants EXCEPTIONS from code provisions that should sculpt the building and provide some relief from canyon effects on people nearby. It is as though the Downtown Plan is a total

PP2

joke. There should be a totally code-complying project design set out an analyzed so that an informed decision could be made. This is just another project maxing out the site BEYOND what the Code set out. Exception after exception with no ability to see the environmental, aesthetic, climate impact of those repreated exceptions.

PP2 cont.

This lack of information on those building mass exception is compounded by another exception for WIND exceedances.

#### Prop M impacts - parking

This DEIR, like most others, just rattles off a short summary of the Prop M Priority Policies without acknowledging that they are POLICIES to be <u>applied</u> in the review of a project. (4) SPECIFICALLY reads as follows: that commuter traffic not impede Muni transit service or overburden our streets.

A parking garage at this location will impede Muni operations because the cars entering and exiting the garage MUST cross multiple Muni routes. The Planning Code explicitly DISCOURAGES parking in the C-3-O because of those conflicts with transit and pedestrians.

PP3

This is NOT an issue of parking deficit - which the DEIR waves away on p. 44. The analysis is provided only for "informational purposes." But where is the INFORMATION? The LOS table on p.47 shows CUMULATIVE impacts in EVERY intersection in this area - even those currently at B, C, D, E going to level F. This is for both am and pm peak hours. The decision maker should be forced to confront whether ANY new garage that contributes to this level of congestion is acceptable.

#### **Shadow impacts**

The term "POPOS" is weird, NOT A NORMAL TERM PEOPLE USE, and disorienting. It is NOT useful, but obscures information. Perhaps this is the author's intent?

SH1

There are several levels of shadows that are relevant to looking at this project - but graphic information is on only provided on one of them. And it is provided in a manner which obscures information and hinders informed decisions.

Prop K (sec 295) limits go from one hour after sunrise until one hour before sunset. There is no time of the year when 10am is one hour after sunrise, and no time when 3pm is one hour before sunset. Yet those are the "representative" times (besides noon) for which shadow information is provided on 116-119. How many people are walking on the street and affected by sunlight at 10 and 3, versus those at 8-9 or 4-5?

SH2

The Planning Code restricts shadows in Sec. 147 on publicly accessible open spaces, spaces other than the Rec Park facilities covered by Prop K. Please provide at least minimal graphics showing how Prop K and Sect 147 shadows fall. Please explain the LEGAL justification for not providing in a readily accessible form - that CAN BE TESTED VIA PUBLIC COMMENT - shadow graphics that illuminate how

the project meets/doesn't meet SAN FRANCISCO CODE limits on shadows, which providing them for general impacts. It is unacceptable to state, as in fn 95 that information on impacts on Justin Herman Plaza and Redwood Park is available for review in the files. No one - particularly decision-making Commissioners - has the time to dig that information out. Particularly when the EIR is supposed to provide adequate environmental information.

SH2 cont.

Re open spaces/parks to be created in the near future (p. 113-121), HOW does Planning KNOW that none of those will be part of the Rec Park system?

SH3

The list and height of "cumulative" projects seems to assume that the limits of Prop K can be violated. Please explain.

SH4

Housing assumptions (p.123) - the cavalier assumption that because the lower-income work force cannot afford San Francisco housing and that such is okay is unnerving. Please discuss the HOUSING goals - by affordability level - in the SF Housing Element. It is really so boring that we are consciously increasing income disparities in San Francisco? Is becoming a higher income city consistent with CITY policies. I refer you to the first two statements of policy of Prop M in its preamble:

PH1

It is the policy of the People of Francisco that the amount and pace of commercial office development be limited so that: THE IMPACT OF COMMERCIAL OFFICE DEVEOPMENT WILL NOT OVERWHELM OUR CITY'S TRANSIT, TRAFFIC AND PARKING CAPACITY, HOUSING CAPACITY <u>AND AFFORDABILITY</u>, AND NEIGHBORHOOD CHARACTER; and OUR CITY WILL REMAIN AFFORDABLE FOR THOSE LIVING AND WORKING IN IT.

Part of the neighborhood character of San Francisco is NOT being only or even predominantly upper income residents.

<u>Sea Level Rise</u> - on p. 126 issues raised re sea level rise are basically pooh-poohed. What is the effect of the extra excavation for a level of parking. Excavation into a rising water table. Is this not one justification for electing an alternative which does NOT include extra excavation for the parking? In the **Initial Study** - pp 63-65 (but not in the main text) - it is explained that this site was historically part of the Bay, and it has been filled over Bay Mud which 50 feet below grade. This site is subject to liquefaction.

HY1

How is sea level rise on bay fill site, subject to liquefaction, not worthy of discussion in the DEIR text?

November 2, 2010 - 350 Mission Street DEIR - page 4

#### Alternatives

The alternatives have been manipulated so that the project with NO Parking still has the same massing, and exceptions, as a project that complies with the bulk limits of the Code. They should be merged - a code complying alternative with NO PARKING.

Respectfully submitted,

Sue C. Hestor

Cc: Brad Paul

## **Attachment 2: Transcript of DEIR Public Hearing**

Case No. 2006.1524E 350 Mission Street

Present:

Ron Miguel, President

Christina R. Olague, Vice President

Michael J. Antonini, Commissioner

Kathrin Moore, Commissioner

Hisashi Sugaya, Commissioner

Jonas Ionin, Clerk

Room 400 City Hall, 1 Dr. Carlton B. Goodlett Place

Commission Chambers

San Francisco, California

Thursday, October 28, 2010

5:00 P.M.

Item 12 - 350 Mission Street Draft EIR

San Francisco Planning Commission

John S. Rahaim, Director of Planning

Scott Sanchez, Zoning Administrator

Brett Bollinger, Planning Department, Major Environmental Analysis Section

Reported by Tasha Sanbrailo

CALIFORNIA REPORTING LLC 52 Longwood Drive, San Rafael, CA 94901 (415) 457-4417

CALIFORNIA REPORTING LLC 52 Longwood Drive, San Rafael, CA 94901 (415) 457-4417

7

PROCEEDINGS	1 to the Draft EIR as appropriate.	e. This is not a hear!
OCTOBER 28, 2010 5:02 P.M.	2 consider approval or disapproval of	al of the project, that
-000-	3 hearing will follow the Final EIR certification.	EIR certification.
Item 12. Case No. 2006.1524E - 350 Mission Street - Public	4 Comments today should be	d be directed to the ac
Hearing on the Draft EIR.	5 and accuracy of information con	contained in the Draft E
MR. IONIN: Now, you are on Item 12. Case No.	6 Commenters should speak slowly and	, and clearly so that th
2006.1524E at 350 Mission Street, Draft Environmental Impact	7 Reporter can produce an accurate transcript.	ite transcript. Also,
Report. Please note that written comments will be accepted	8 commenters should state their name	name and address so tha
at the Planning Department's Offices until 5:00 p.m. on	9 can be properly identified, and	d so that they can be
November 2 <sup>nd</sup> , 2010.	10 copy of the Comments and Respon	Comments and Responses document when comp
MR. BOLLINGER: Good afternoon, President Miguel	11 After hearing comments from the	e general public, we wi
and members of the Commission. I am Brett Bollinger with	12 take any comments on the Draft	Draft EIR by the Planning
the Major Environmental Analysis Section of the Planning	13 Commissioners.	
Department. This is a hearing to receive comments on the	14 The public comment po	The public comment period for this project
Draft EIR, Environmental Impact Report, for Case No.	15 on September 15 <sup>th</sup> , 2010, and ex	extends until 5:00 p.m.
2006.1524E, the 350 Mission Street Project, which consists	16 Tuesday, November 2 <sup>nd</sup> , 2010. T	This concludes my prese
of demolition of an existing four-story institutional retail	17 on this matter. And, unless th	the Commission members
building and construction of a new 375-foot high, 356,000	18 questions, I would respectfully	y suggest that the pub
square foot office building with ground level restaurant and	19 hearing period be opened. Than	Thank you.
retail uses, 61 parking spaces, and 64 bicycle parking	20 PRESIDENT MIGUEL: T)	Thank you. I only have
spaces.	21 comment card, Lee Molten - oh,	oh, excuse me, sorry. Oka
Staff is not here to answer comments today,	22 there any public comment on the	this item on the Draft E
comments will be transcribed and responded to in writing in	23 that case, public comment is c	closed and, as you have
the Comments and Responses document, which will respond to	24 heard, public comment period is	is actually open until
all verbal and written comments received, and make revisions  CALIFORNIA REPORTING LLC  52 Longwood Drive, San Rafael, CA 94901 (415) 457-4417	25 1°t', Monday – CALIFORNIA RI 52 Longwood Drive, San Rafa	- CALIFORNIA REPORTING LLC 52 Longwood Drive, San Rafael, CA 94901 (415) 457-4417

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_	MR. IONIN: November 2 <sup>nd</sup> .
7	PRESIDENT MIGUEL: Oh, okay, because November 1st
3	is actually on the Draft EIR.
4	MR. BOLLINGER: Commissioners, that was because
2	the project was continued to this week -
9	PRESIDENT MIGUEL: All right, I don't have a
7	problem - okay, Tuesday, very good. Commissioner Antonini.
œ	COMMISSIONER ANTONINI: Yeah, I thought it was
6	very well done and, as should be the case, talks about the
10	project itself, which it is compliant with the height
=	zoning, but there are some exceptions that are asked and
12	analyzed in here, and then they go on to present some other
13	alternatives, as they should. And that seems to be quite
14	good, you know, complying without the exemption and then the
15	no project alternative and some others that deal with
16	certain facets of the project. So, I think it was a very
17	well written EIR and I'm very happy with the EIR. $oldsymbol{f L}$
18	PRESIDENT MIGUEL: Yeah, I think the EIR was
19	complete, it was certainly adequate, and I look forward to 61
20	the project coming before us.
21	[Concluded at 5:10 p.m.]
22	
23	
24	
25	
	CALIFORNIA REPORTING LLC 52 Longwood Drive, San Rafael, CA 94901 (415) 457-4417

# • CHAPTER VIII

Appendices

# **APPENDIX A**

Notice of Preparation and Initial Study

Case No. 2006.1524E 350 Mission Street

June 2, 2010

To Responsible Agencies, Trustee Agencies, and Interested Parties:

AVAILABILITY OF THE INITIAL STUDY

RE:

CASE NO. 2006.1524E - 350 MISSION STREET OFFICE BUILDING NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND

A Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the above-referenced project, described below, has been issued by the Planning Department. The NOP/Notice of Public Scoping Meeting is either attached or is available upon request from Brett Bollinger, whom you may reach at (415) 575-9024 or at the above address. It is also available online at http://www.sf-planning.org/index.aspx?page=1828. This notice is being sent to you because you have been identified as potentially having an interest in the project or the project area.

Project Description. The project sponsor, GLL US Office, L.P., proposes to demolish the existing four-story building at 350 Mission Street and construct a 24-story, approximately 355-foot-tall (plus mechanical space) tower containing approximately 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of public open space. Retail and restaurant spaces would include a retail store and a coffee bar/café on the ground floor and a restaurant and conference space on the second floor. A 40-foot-wide driveway on Fremont Street would provide access to two loading and two service parking spaces on the ground floor and 61 parking spaces and 64 bike parking spaces in three subgrade levels. The building would be constructed to standards required for a LEED (Leadership in Energy Efficient Design) Gold rating.

The project would require Planning Commission review and approval under Section 309 of the Planning Code, Permit Review in C-3 Districts, and the sponsor is seeking exceptions, pursuant to Section 309, to Planning Code requirements for upper tower bulk (Section 270), and separation of towers (Section 132.1)(c)). In addition, the project may seek an exception to the Code's wind current requirements (Section 148), based on the results of a wind study. The project would be subject to Planning Code Section 321 (Office Development: Annual Limit) and Section 295, concerning shadow impacts. In addition, construction may require use of curb lane(s) adjacent to the site for a pedestrian walkway, which would require permits from the Department of Public Works and the Municipal Transportation Agency. The project would also require building permits, which would require review and approval by the Planning Department and Department of Building Inspection (DBI).

The 18,909-square-foot project site (Block 3710, Lot 017) is in a C-3-O (Downtown Commercial-Office) Use District and a 550-S Height and Bulk District.

<u>Determination</u>. The Planning Department has determined that an EIR must be prepared for the proposed project prior to any final decision regarding whether to approve the project. The purpose of the EIR is to provide information about potential significant physical environmental effects of the proposed project, to identify possible ways to minimize the significant effects, and to describe and analyze possible alternatives to the proposed project. Preparation of an NOP or EIR does not indicate a decision by the City to approve or to disapprove the project. However, prior to making any such decision, the decision makers must review and consider the information contained in the EIR. The (EIR) will evaluate potential impacts, including cumulative impacts, related to traffic and transportation, air quality, greenhouse gas emissions, shadow and wind, and hazardous materials. Other issues have been determined to result in less-than-significant impacts, as documented in the Initial Study. The EIR will also evaluate alternatives to the proposed project, including the required No Project Alternative and one or more other alternatives that would reduce or eliminate significant environmental impacts of the proposed project.

1650 Mission S Suite 400 San Francisco. CA 94103-2479

Reception: 415.558.6378

415.558.6409

Planning Information: 415.558.6377 The Planning Department will hold a **PUBLIC SCOPING MEETING** on **Tuesday**, **June 22**, **2010**, **at 6:00 p.m. at 50 Fremont Street**, **Suite 2275** (office of the project sponsor, GLL US Office, across the street from the project site. The purpose of this meeting is to receive oral comments to assist the Planning Department in reviewing the scope and content of the environmental impact analysis and information to be contained in the EIR for the project. Written comments will also be accepted until the close of business on **Friday**, **July 2**, **2010**. Written comments should be sent to Bill Wycko, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

If you work for an agency that is a Responsible or a Trustee Agency, we need to know the views of your agency as to the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency. If you have questions concerning environmental review of the proposed project, please contact **Brett Bollinger** at (415) 575-9024 or <u>Brett.Bollinger@sfgov.org.</u>



# SAN FRANCISCO PLANNING DEPARTMENT

## Notice of Preparation of an Environmental Impact Report

Date: June 2, 2010
Case No.: 2006.1524E

Project Title: 350 Mission Street

Zoning: C-3-O (Downtown Commercial—Office)

550-S Height and Bulk District

*Block/Lot:* 3710/017

Lot Size: 18,909 square feet
Project Sponsor GLL US Office, L.P.

Contact: Daniel Frattin, Reuben & Junius LP – (415) 567-9000

Lead Agency: San Francisco Planning Department Staff Contact: Brett Bollinger – (415) 575-9024

Brett.Bollinger@sfgov.org

1650 Mission St Suite 400 San Francisco, CA 94103-2479

Reception: 415.558.6378

Fay:

415.558.6409

Planning Information: 415.558.6377

#### PROJECT DESCRIPTION

The project sponsor, GLL US Office, L.P., proposes to demolish the existing four-story building at 350 Mission Street and construct a 24-story, approximately 355-foot-tall (plus mechanical space) tower containing approximately 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of public open space. Retail and restaurant spaces would include a retail store and a coffee bar/café on the ground floor and a restaurant and conference space on the second floor. A 40-foot-wide driveway on Fremont Street would provide access to two loading and two service parking spaces on the ground floor and 61 parking spaces and 64 bike parking spaces in three subgrade levels. The building would be constructed to standards required for a LEED (Leadership in Energy Efficient Design) Gold rating.

The project would require Planning Commission review and approval under Section 309 of the Planning Code, Permit Review in C-3 Districts, and the sponsor is seeking exceptions, pursuant to Section 309, to *Planning Code* requirements for upper tower bulk (Section 270), and separation of towers (Section 132.1)(c)). In addition, the project may seek an exception to the *Code's* wind current requirements (Section 148), based on the results of a wind study. The project would be subject to *Planning Code* Section 321 (Office Development: Annual Limit) and Section 295, concerning shadow impacts. In addition, construction may require use of curb lane(s) adjacent to the site for a pedestrian walkway, which would require permits from the Department of Public Works and the Municipal Transportation Agency. The project would also require building permits, which would require review and approval by the Planning Department and Department of Building Inspection (DBI).

#### **ENVIRONMENTAL REVIEW TOPICS**

The Environmental Impact Report (EIR) will evaluate potential impacts, including cumulative impacts, related to traffic and transportation, air quality, greenhouse gas emissions, shadow and wind, and hazardous materials. Other issues have been determined to result in less-than-significant impacts, as documented in the Initial Study for the proposed project. The EIR will also evaluate alternatives to the proposed project, including the required No Project Alternative and one or more other alternatives that would reduce or eliminate significant environmental impacts of the proposed project.

#### FINDING

THIS PROJECT COULD HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT, AND AN ENVIRONMENTAL IMPACT REPORT WILL BE REQUIRED. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the reasons as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

#### **PUBLIC SCOPING PROCESS**

June 1, 2010

Pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, a public scoping meeting will be held to receive oral comments concerning the scope of the EIR. The meeting will be held on Tuesday, June 22, 2010, at 6:00 p.m. at 50 Fremont Street, Suite 2275 (office of the project sponsor, GLL US Office, across the street from the project site). Written comments will also be accepted at this meeting and until 5 p.m. on Friday, July 2, 2010. Written comments should be sent to Bill Wycko, Environmental Review Officer, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103.

State Agencies: If you work for a responsible agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

BILL WYCKO

**Environmental Review Officer** 

## **INITIAL STUDY**

# 350 MISSION STREET PLANNING DEPARTMENT CASE NO. 2006.1524E

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## LIST OF ACRONYMS

Cal-OSHA Division of Occupational Safety and Health, California Department of Labor Relations

CDMG California Division of Mines and Geology (now California Geological Survey)

CEQA California Environmental Quality Act

Corps U.S. Army Corps of Engineers

dBA A-weighted Decibel(s)

DBI San Francisco Department of Building Inspection

DPH San Francisco Department of Public Health
DPW San Francisco Department of Public Works

ERO Environmental Review Officer, San Francisco Planning Department

FEMA Federal Emergency Management Agency

FIRMs Flood Insurance Rate Maps

HUD Department of Housing and Urban Development LEED® Leadership in Energy and Environmental Design

LOS Level of Service

MEA Major Environmental Analysis Division, San Francisco Planning Department

MRZ-4 Mineral Resource Zone 4

NFIP National Flood Insurance Program

NPDES National Pollutant Discharge Elimination System
OPR Governor's Office of Planning and Research

OSHA Federal Occupational Safety and Health Administration

SFFD San Francisco Fire Department SFHA Special Flood Hazard Area

SFMTA San Francisco Municipal Transportation Agency
SFPUC San Francisco Public Utilities Commission

SMP Site Mitigation Plan

UST Underground Storage Tank

## Initial Study 2006.1524E – 350 Mission Street

#### A. PROJECT DESCRIPTION

The project sponsor, GLL US Office, L.P., proposes to demolish the existing four-story building at 350 Mission Street and construct a 24-story, approximately 355-foot-tall (plus mechanical space) tower containing approximately 356,000 square feet of office space, 6,600 square feet of restaurant and retail space, and 6,960 square feet of public open space. Retail and restaurant spaces would include a coffee bar/café on the ground floor and a restaurant and conference space on the second floor. A 40-foot-wide driveway on Fremont Street would provide access to two loading and two service parking spaces on the ground floor and 61 parking spaces and 64 bike parking spaces in three subgrade levels. The building would be constructed to standards required for a LEED (Leadership in Energy Efficient Design) Gold rating.<sup>1</sup>

#### PROJECT LOCATION AND SITE CHARACTERISTICS

The project site, located at 350 Mission Street, on the northeast corner of Mission and Fremont Streets, is on Assessor's Block 3710, Lot 17. <sup>2</sup> The site is within the C-3-O Downtown Office Use District and the 550-S height and bulk District (550 foot height limit; setbacks required for floors above building "base"; permitted floor area ratio is 9.0:1; FAR of up to 18.0:1 is permitted with transfer of development rights). The approximately 19,000-square-foot project site is generally, flat with an elevation of 3 feet, SFD at the corner of Mission and Fremont Streets.<sup>3</sup> The site, which has frontages on Mission and Fremont Streets, is currently fully occupied by a four-story, approximately 60-foot-tall building providing about 95,000 square feet of floor area, including the 13,000-square-foot basement. Approximately 72,000 square feet of office space, currently in educational use by Heald College, and 10,000 square feet of retail space occupy the existing building. No off-street parking spaces or loading spaces are currently provided. The building was built in 1923. There is a total of nine street trees along the Fremont and Mission Street frontages. Figure 1 shows the project location.

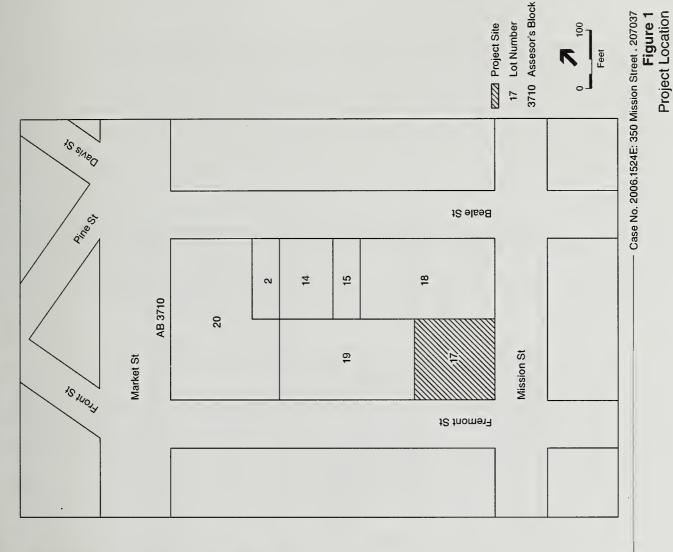
#### PROPOSED PROJECT

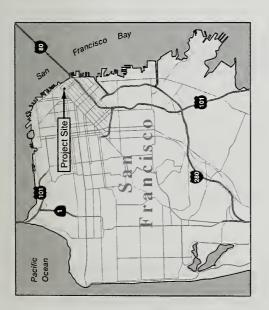
The proposed project would consist of a 24-story, approximately 355-foot-tall office tower with office uses occupying approximately 356,000 square feet on floors 5 through 24 (the building would have no

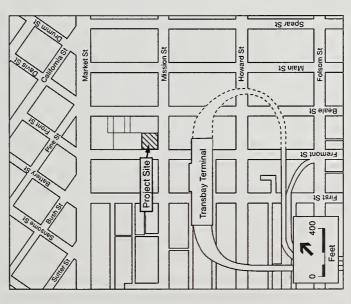
The LEED Building Rating System is a third-party certification program and benchmark for the design, construction and operation of green buildings. It provides building designers, owners and operators with tools to assess a project's performance with respect to environmental responsibility. .More information about the LEED rating system can be obtained at <a href="http://www.usgbc.org/DisplayPage.aspx?CategoryID=19">http://www.usgbc.org/DisplayPage.aspx?CategoryID=19</a>, accessed on April 21, 2008.

Consistent with San Francisco practice, Market Street and streets parallel are considered east-west streets. Thus, Mission Street runs east-west, and Fremont Street runs north-south.

San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum.







SOURCE: ESA

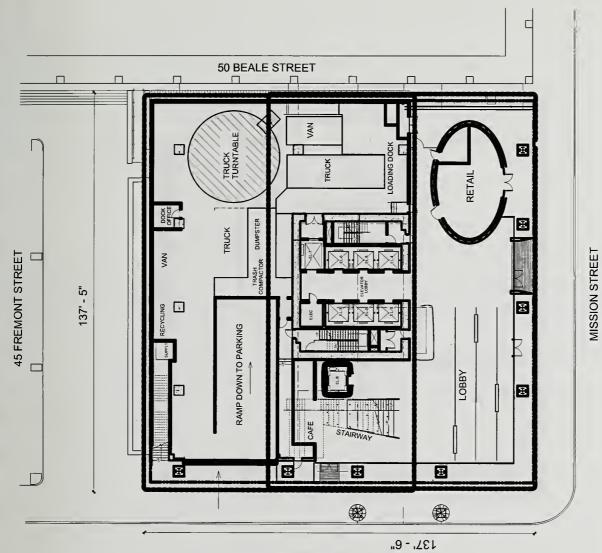
floor 13, nor floors 3 or 4). The ground floor would have a height of 50 feet, equaling approximately 3 to 4 stories, and a mezzanine level would be incorporated within this space. Approximately 6,600 square feet of retail and restaurant space would be divided into four spaces on the ground floor and the mezzanine, These spaces would include a 1,000-square-foot retail space on the ground floor facing Mission Street, a small coffee bar/café near the northwest corner of the ground-floor lobby, and an approximately 4,600-square-foot restaurant space with a separately demised conference/dining room on the mezzanine. Pedestrian entrances would be located on the Fremont and Mission Street frontages and would open to a 50-foot-tall lobby, which would include part of the mezzanine floor that would be open to the ground floor. The lobby would function, in part, as an enclosed publicly accessible open space, including internal access to the retail space and a wide stairway to the mezzanine that would double as public amphitheater style seating. The approximately 35-foot-tall mezzanine floor would be occupied mostly by the restaurant/conference space but would include about 2,200 square feet of enclosed public seating at the top of the stairway. The mezzanine level would cover the north and east portion of the ground floor and leave the southwest lobby space open to the entire 50-foot-tall volume.

Vehicle and freight loading access would be via a 40-foot-wide two-way driveway on Fremont Street on the northwest corner of the project site. The northern portion of the ground floor would include four off-street freight loading spaces (two truck and two service van), a 30-foot-diameter turntable for large vehicle turnaround, and building service spaces including trash and storage facilities. Three basement levels would provide 61 independently accessed parking spaces, including three spaces dedicated to shared electric vehicles (with battery charging capability); 64 bicycle parking spaces; building services and mechanical space; and a fitness center for use by building tenants. **Figures 2 and 3** depict the proposed ground floor and mezzanine plans, respectively. **Figure 4** depicts a representative upper-story floor plan.

The building would contain approximately 340,000 "gross square feet" (square feet of gross floor area), as measured in accordance with the *San Francisco Planning Code*, Section 102.9, consisting almost entirely of office space. To meet the *Planning Code* open space requirement of one square foot per 50 square feet of gross floor area in the C-3 District, a total of 6,800 square feet of publicly accessible open space would be required. For the purposes of this requirement, the enclosed lobby and public seating areas would be considered an "indoor park." The *Planning Code* (Section 138) and Downtown Plan element of the *San Francisco General Plan* consider an enclosed indoor park to be one form of "open space" that may be used for the purposes of satisfying this requirement, assuming applicable guidelines are met.<sup>5</sup> The ground floor lobby, stairway, and adjacent exterior open space would contribute approximately 4,755 square feet of open space. On the mezzanine, at the top of the stairway, the project would provide a public seating area of approximately 2,205 square feet. Thus, the project would exceed the *Planning Code* 

Skidmore, Owings, & Merrill, LLP. 100 Percent Design Development Drawings: Building Elevations, South and West. 2008.

The Downtown Plan (Table 1, Guidelines for Downtown Open Space) states that an Indoor Park should have, among other qualities, at least one street-facing glass wall and be accessible from street level; contain at least 1,000 sq. ft. and be at least 20 feet tall; provide food service and adequate seating, sunlight, and ventilation; and include design features.

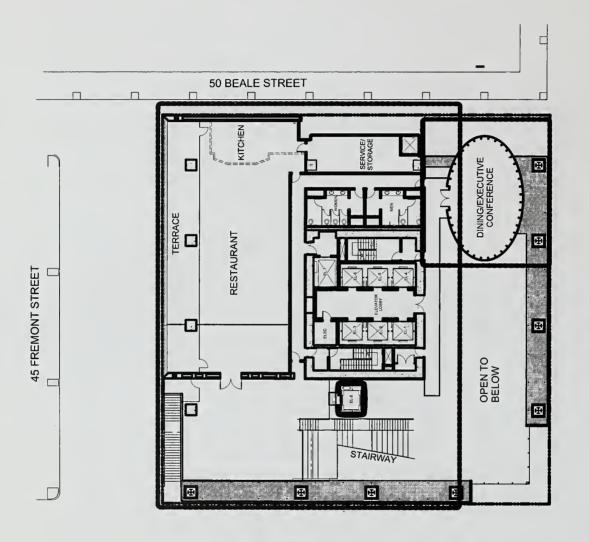


FREMONT STREET



SOURCE: Skidmore, Owings, & Merrill, LLP

MISSION STREET



FREMONT STREET



SOURCE: Skidmore, Owings, & Merrill, LLP

Case No. 2006.1524E; 350 Mission Street (207037)

FREMONT STREET



MISSION STREET

SOURCE: Skidmore, Owings, & Merrill, LLP

Section 102.9 requirements with the provision of roughly 6,960 square feet of publically accessible open space.

The three basement levels would contain a total of 61 parking spaces. The first basement level would have three dedicated parking spaces for electric vehicles (with battery charging capability) and three disabled-accessible spaces (which would meet the requirement of *Planning Code* Section 155(i)). The second and third basement levels would include approximately 55 marked parking spaces (capacity for about 80 vehicles with valet parking operations). The project would provide a minimum of 64 stalls for bicycle parking, which would meet the requirement of *Planning Code* Section 155.4(d).<sup>6</sup> The proposed floor area devoted to off-street parking (approximately 23,540 square feet) would be within the maximum permitted of seven percent of building gross floor area pursuant to *Planning Code* Section 151.1. For purposes of this calculation parking area includes spaces and aisles and excludes entrance and exit driveways and ramps. Therefore, the proposed project would comply with Section 151.1. Four off-street loading spaces (two truck and two service van), also accessible from Fremont Street, would meet the *Planning Code* requirement under Section 152.1 (see Approvals Required, below).

According to *Planning Code* Section 270, which implements the direction for building massing contained in the Downtown Plan element of the *San Francisco General Plan*, buildings over 160 feet in height are considered to have a base, lower tower and upper tower. The base, which may not exceed a height of 1.25 times the width of the principal adjacent street, has no plan or area restrictions under this section but is required to be visually delineated from the lower and upper towers through a setback, cornice line, or other means. As Mission Street is the principal adjacent street and is 82.5 feet wide, the base height for this project is considered to be 103 feet tall. As proposed, the project building would be generally rectilinear in shape with an approximately 55-foot-tall building base (inclusive of ceiling fixtures below the fifth floor) physically distinguished from the remaining 300 feet of the office tower (plus mechanical space).

The combined ground floor and mezzanine levels would be the project's primary distinguishing feature in terms of articulation and materials. In particular, at the corner of Mission and Fremont Streets, the ground floor and mezzanine together would serve as an approximately 50-foot-tall atrium (55 feet inclusive of ceiling fixtures), large portions of which would be open to the sidewalk in good weather. Publicly accessible open space would be located on both the ground floor and mezzanine, and the atrium would have large expanses of clear glass. Behind the glass columns would rise the full height of the atrium. A glazed, oval-shaped enclosure near the southeast corner of the atrium would house retail space on the ground floor and a dining/conference room at the mezzanine level.

Above the atrium, the project's façade would be clad in an energy-efficient glass curtain wall. **Figure 5** presents proposed project elevations.

The draft Transit Center District Plan (published November 2009) proposes to amend Section 155.4 of the Planning Code to increase number of required onsite secure bicycle parking spaces for commercial buildings to one space for every 6,000 gsf of office space. This would increase the required number of bicycle spaces for the project to approximately 55 spaces.

The project's office component (spanning from approximately 55 to 355 feet in height) would have no setbacks from the property line along the west and south faces. The east face would generally be set back approximately 14 feet from the east property line, except for a 40-foot-wide mechanical element running from levels three through 24 that would extend approximately 7.5 feet into this space, and thus would be setback only approximately 7 feet from the east property line. Also, the north face would be set back approximately 6.5 feet from the northern property line. Therefore, the project would not conform to the required 15-foot set back from the east and north property lines pursuant to Section 132.1(c). The tower would have a maximum plan length of approximately 130 feet and a maximum diagonal dimension of approximately 180 feet. The average floor size, as measured in accordance with the Planning Code Section 102.9, would be about 15,000 square feet. These dimensions would be consistent with the bulk limits of Planning Code Section 270 for the building base (up to 103 feet in height) and lower tower (103 feet to 220 feet in height), but would exceed the permitted diagonal dimension and average floor area for the upper tower (above 220 feet in height). Accordingly, the project would require exceptions to the upper tower bulk limits, as is permitted under Planning Code Section 309, Permit Review in C-3 Districts. Under Section 309, for new projects or additions larger than 50,000 square feet or 75 feet in height, such as the proposed project, the Planning Commission holds a public hearing on all authorizations for the project. The Planning Commission may impose conditions on the project in regard to siting and design; view, parking, traffic and transit effects; energy consumption; pedestrian environment; and other matters. The project includes demolition of the four-story building currently occupying the project site. The existing building contains approximately 95,000 square feet of office (currently occupied with educational uses), retail and accessory uses, including a basement. It contains no parking facilities and fully occupies the lot. The building, which was built in 1923, is not currently listed in the California Register of Historical Resources nor is it identified as significant in a local register, such as Article 10 and Article 11 of the Planning Code. Tenants in the existing building include Heald College, Starbucks, Noah's Bagels, Lee's Deli, Happy Donuts and Powersource Juice Bar. Approximately 150 full- and part-time employees currently work at the project site.

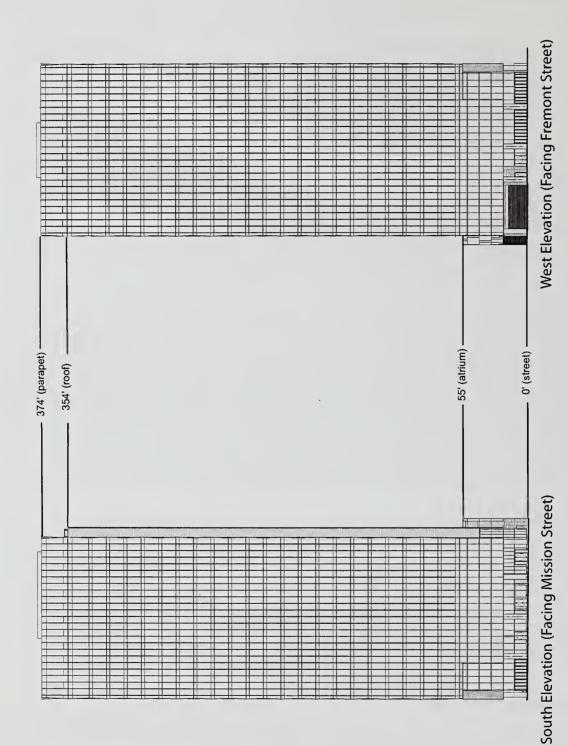
The proposed project would be constructed atop a mat foundation. Excavation for the three basement levels and the foundation would extend to approximately 50 feet below grade, and would require removal of approximately 35,000 cubic yards of soil.

Project construction would take approximately 22 months, and occupancy is anticipated in late 2012. Construction costs are currently estimated at approximately \$85 million. The project architect is Skidmore, Owings & Merrill LLP.

#### Approvals Required

The proposed project's office and retail uses are principal permitted uses in the C-3-O (SD) District. At 355 feet in height, the proposed project would also be consistent with the site's height limit of 550 feet. Therefore, no special approvals are required with respect to land use or building height.

Case No. 2006.1524E: 350 Mission Street (207037)



SOURCE: Skidmore, Owings, & Merrill, LLP

The project would require Planning Commission review and approval under Section 309, Permit Review in C-3 Districts, because the project would exceed 50,000 gross square feet and because the sponsor would seek exceptions, pursuant to Section 309, to the following Planning Code sections: bulk requirements (Section 270) because the upper tower portion of the building (above a height of 220 feet) would exceed the maximum permitted floor area and diagonal plan dimension; and the requirement for separation of towers (Section 132.1)(c)). The Code requirement, based on the building's 355-foot height, is a minimum tower setback of 19 feet from the centerline of adjacent street(s) and from interior property line(s). The project would have a setback of approximately 14 feet from the eastern interior property line (adjacent to the building at 50 Beale Street), but this setback would be penetrated by a 40-foot-wide mechanical element running extend approximately 7.5 feet into this space. The project would have a setback of approximately 6.5 feet from the northern interior property line (adjacent to the building at 45 Fremont Street). The project would comply with the setback requirement from abutting streets.<sup>7</sup>

In addition, the project may seek an exception to the Code's ground-level wind current requirements (Section 148) if it is determined that the project would not reduce existing exceedances of the pedestrian wind speed criterion and/or would result in exceedances of both the pedestrian and seating comfort criteria. Section 309 also permits the imposition of certain conditions in regard to such matters as a project's siting and design; view, parking, traffic and transit effects; energy consumption; pedestrian environment; and other matters. The proposed project would also be subject to review and approval pursuant to Planning Code Section 321 (Office Development: Annual Limit) and Sections 146 and 295, concerning shadow impacts.

The project would be required to comply with the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 et. seq.), which would require that the project sponsor either fund the construction of 92 affordable housing units<sup>8</sup> or pay an in-lieu fee to the City in the amount of \$19.89 per gross square foot of office space.

As a downtown office project, the project would also be subject to certain other *Planning Code* sections beyond those noted above: Section 138.1, pedestrian streetscape improvements; Section 139, downtown park fees; Section 143, street trees; Section 149, public art requirements; Section 163, transportation management and transportation brokerage services; Section 164, San Francisco Resident Placement and Training Program; Section 165, child care plans and child-care brokerage; as well as transit development impact fees under Article 38 of the Administrative Code.

In addition, construction may require use of one or more of the curb lanes adjacent to the project site for a pedestrian walkway, which would require a street space permit from the Bureau of Street Use and Mapping of the Department of Public Works and a special traffic permit from the Department of Parking and Traffic of the Municipal Transportation Agency.

The setbacks from Fremont and Mission Streets, each of which is 82 feet, 6 inches in width, would be more than 41 feet.

Based on 0.00027 housing units per gross square foot of office development and a project of 340,000 square feet of gross floor area, per Planning Code Section 313.5.

The project would also require building permits, which would require review and approval by the Planning Department and Department of Building Inspection (DBI).

### **B. PROJECT SETTING**

The proposed project is within San Francisco's Financial District, which functions as the densely developed center of commerce and employment for the city as well as for the nine county Bay Area. The site is within the C-3-O Downtown Office District, on Assessor's Block 3710, Lot 17. The project site is within the 550-S height and bulk district, which has a height limit of 550 feet; bulk limits for the lower and upper towers require setbacks so that the floor area decreases as the building height increases. The C-3-O district is described in *Planning Code* Section 310.3 as consisting primarily of high-quality office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales (including restaurant) and personal services uses. The C-3-O District permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted with transfer of development rights (TDR), and the project, as proposed, would have a FAR of 18:1.9

The project site is flat; elevation at the site is approximately 3 feet, SFD.<sup>10</sup> The project vicinity is also flat and level, although the ground level rises in elevation southward towards Rincon Hill, which begins its slope upward at Howard Street and rises to over 100 feet in elevation less than one-half mile from the project site to the south. Because the original San Francisco Bay shoreline once reached to the corner of First and Mission Streets, the project site is located on artificial fill used in the early years of City growth. Accordingly, the project site is within the "Maher area" (bayward of the historic high tide line), an area in which soil investigation is required per Article 20 of the San Francisco Public Works Code and Article 22A of the Public Health Code (see Section E.15, Hazards, p. 72).

Development in the vicinity consists primarily of office space above ground-floor retail stores. The block on which the project site is located contains three high-rise office buildings—ranging in height from about 330 feet to 470 feet—in addition to the four-story office and retail building on the project site. There are also office towers across Fremont Street to the west. To the southwest, the Transbay Transit Terminal is located diagonally across the intersection of Fremont and Mission Streets from the project site. Immediately south of the site, across Mission Street, is the newly constructed Millennium Tower, the City's tallest residential building, at 60 stories and nearly 650 feet in height. It has ground-floor restaurant space on Mission Street.

Market Street is San Francisco's major commercial thoroughfare and transit artery, is one block north of the project site. The Embarcadero is five blocks east of the site, and the elevated Interstate 80 freeway that

<sup>&</sup>lt;sup>9</sup> Transfer of Development Rights is the process through which units of gross floor area may be transferred, pursuant to the provisions of this Section and Article 11 of the Planning Code, from a Transfer Lot to increase the allowable gross floor area of a development on a Development Lot for the purpose of preservation of buildings and district of architectural, historical, and aesthetic importance in the C-3 (Downtown Commercial Office) District (Sec. 128).

<sup>10</sup> SFD – San Francisco Datum (see footnote 3, p. 1).

leads to the Bay Bridge is just over three blocks south.<sup>11</sup> The area to the northwest, north, and east of the project site consists primarily of additional high-rise office structures with associated ground-floor retail. West and southwest of the project site, beyond the Transbay Terminal, land uses are generally lower density, but consist primarily of office and retail uses similar to those elsewhere in the neighborhood. Additional residential uses are found two blocks southeast at Rincon Center, at the Infinity towers five blocks southeast, and to the west, on Market, New Montgomery and Third Streets. Nearby hotels include the Hyatt Regency on Market Street and smaller hotels on Steuart Street, along with the Palace Hotel on New Montgomery Street, the Argent Hotel on Third Street, and the Four Seasons Hotel on Market Street near Third Street. Golden Gate University is located on Mission Street between First and Second Streets, a little more than a block west of the site. Additionally, the UC Berkeley Extension San Francisco campus is located in the office tower at 425 Market Street, less than one block from the project site. Heald College, a private two-year school offering career-oriented associates' degrees, currently occupies space in the building on the project site. The Yerba Buena Center/Moscone Convention Center area is about three blocks east of the project site.

The nearest open spaces to the project site include Justin Herman Plaza (on The Embarcadero to the north and south of Market Streets), Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets), Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along The Embarcadero). There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west.

The project site and vicinity is the subject of the draft Transit Center District Plan (TCDP), a comprehensive plan for the southern portion of San Francisco's downtown Financial District, encompassing approximately 145 acres roughly bounded by Market Street, the Embarcadero, Folsom Street, and Third Street. The project would result in new planning policies and controls for land use; urban form, including building height and design; street network modifications/public realm improvements; historic preservation; and district sustainability, including the potential creation of a district-wide combined heat and power (cogeneration) system, the enhancement of green building standards in the district, and reductions in potable water use and stormwater runoff. It would allow for height limit increases in subareas composed of multiple parcels or blocks within the area. The TCDP builds upon other plans in the vicinity, described below:

• Transbay Transit Center/Rail Extension – The Transbay Transit Center will replace the existing Transbay Terminal with a new modern multimodal Transit Center that will serve multiple local and regional transportation systems under one roof and anchor the Transbay Redevelopment Area. The new terminal will replace the existing Transbay Terminal as the terminal for service provided

In the South of Market Area in the project site vicinity, blocks northeast of First Street are primarily 550 feet long (northwest to southeast) and 275 feet wide (northeast to southwest). Blocks southwest of First Street are primarily 550 feet long (northwest to southwest) and 825 feet wide (northeast to southwest). Some blocks southwest of First Street are further subdivided by narrow streets, alleys, or other main thoroughfares, such as New Montgomery Street. Main thoroughfares, including those bordering the project site, are almost exclusively 82.5 feet wide.

by the San Francisco Municipal Railway (Muni), AC Transit, SamTrans, and Golden Gate Transit, along with Greyhound bus service. Assuming that additional funding is secured, the Transit Center also would accommodate an underground extension of the Caltrain line as well as the future California High-Speed Rail from Fourth and King Streets to the new terminal. The new Transit Center and the rail extension were analyzed in an EIS/EIS prepared in 2004 and subsequently amended.<sup>12</sup>

- encompasses about 55 acres and is generally bounded by Mission, Main, Folsom, and Second Streets. The Redevelopment Plan Area contains the existing Transbay Terminal and access ramps, as well as a number of vacant and underutilized properties and older buildings, many of which are substantially deteriorated and/or constructed of unreinforced masonry. The Redevelopment Plan is intended to address these conditions of "blight." The Plan sets forth various projects and programs that will be funded with tax increment dollars over the life of the Redevelopment Plan. Proceeds from the sale of the property and approximately \$178 million of the net tax increment will be pledged to the Transbay Joint Powers Authority to help pay the cost of rebuilding the Transbay Terminal into a regional transit hub (the Transit Center). The Plan also calls for new residential development on parcels along Folsom Street formerly occupied by the Embarcadero Freeway ramps, as well as office space adjacent to the new terminal (the Transit Tower). The Transbay Redevelopment Plan was also analyzed in the previously-referenced EIR for the Transbay Transit Center/Rail Extension.
- Rincon Hill Plan The Rincon Hill Plan, adopted in 2005, encourages high-density residential development and greater building heights in the area between Folsom Street and the Bay Bridge. The goal of the Plan is to encourage the ongoing transformation of the area into a new mixed-use high-density residential neighborhood adjacent to the downtown, with both strong urban design controls and implementing mechanisms to fund the necessary public infrastructure, including open space, streets, community facilities, and affordable housing. Together with plans for the Transbay Redevelopment Plan, the Rincon Hill Plan will create housing for as many as 20,000 new residents. The Plan calls for location of retail shops and neighborhood services along Folsom Street, and transformation of Main, Beale, and Spear Streets into traffic-calmed, landscaped residential streets lined with townhouses and front doors. Funding is also included, from development impact fees, for the acquisition and development of open space in the district.

In addition, several high-rise and/or sizable projects are proposed within the project vicinity: the Transbay Joint Powers Authority (TJPA) proposes to construct an approximately 1,000-foot-tall tower adjacent to the planned new Transbay Transit Center (replacement terminal) on Mission Street, and is

U.S. Department of Transportation Federal Transit Administration, the City and County of San Francisco, Peninsula Corridor Joint Powers Board, and San Francisco Redevelopment Agency, Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project Final Environmental Impact Statement/Environmental Impact Report and Section 4(f) Evaluation, June 2004. Available for review by appointment at the Planning Department, 1650 Mission Street, Suite 400, in Case No 2007.0558E and also available at <a href="http://www.transbaycenter.org/TransBay/content.aspx?id=114">http://www.transbaycenter.org/TransBay/content.aspx?id=114</a>. Amendments to the EIS/EIR are available at: <a href="http://www.transbaycenter.org/TransBay/content.aspx?id=67">http://www.transbaycenter.org/TransBay/content.aspx?id=67</a>.

also considering high-rise development of a second TJPA-owned parcel on Howard Street between First and Second Streets. The Planning Department either has applications on file, or has had preliminary discussions with developers, for towers at 50 First Street (two towers, an 850-foot, office tower fronting on First Street and a 550-foot residential tower fronting on Mission Street, along with retail space on the ground floor of each), 222 Second Street (26-story, 350-foot-tall office building), 13 181 Fremont Street (877foot, 65-story residential and office tower), 41 Tehama Street (400-foot, 39-story residential building), the Palace Hotel at New Montgomery and Market Streets (690-foot, 60-story residential tower at the nonhistoric southwestern corner of the existing hotel), and the southwest corner of Third and Folsom Streets (mixed-use project potentially containing two towers, along with hotel and convention space). In addition, the Planning Department and the San Francisco Redevelopment Agency are evaluating a proposed 605-foot-tall, residential tower at the northeast corner of Third and Mission Streets that would also rehabilitate the historic Aronson Building and provide a new location for the Mexican Museum, while the San Francisco Museum of Modern Art has announced plans for an expansion structure—which may include a tower—on Howard Street, southeast of the existing museum building on Third Street. Beyond these proposed projects, an office building has been approved and construction started and then halted at 535 Mission Street, while there is a long-approved 23-story office building at 524 Howard Street. Additionally, Golden Gate University has publicly discussed future plans for a tower at its Mission Street campus.

## C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	<i>Applicable</i>	Not Applicable
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	⊠	
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	$\boxtimes$	
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	⊠	

#### **PLANNING CODE**

The Planning Code, which incorporates by reference the City's Zoning Maps, governs permitted uses, densities and the configuration of buildings in San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless either the proposed action conforms to the Planning Code, or an exception is granted pursuant to provisions of the Planning Code, or a reclassification (rezoning) of the site occurs. The proposed project would not require rezoning.

The C-3-O district is described in *Planning Code* Section 310.3 as consisting primarily of high-quality office development focusing on finance, corporate headquarters, and service industries, and serving as an employment center for the region. It permits office uses and retail sales (including restaurant) and

<sup>&</sup>lt;sup>13</sup> The 222 Section Street Office Project (Case No. 2006.1106E) Draft EIR was published January 27, 2010. The Response to Comments document is under preparation.

personal services uses. The C-3-O District permits a base floor area ratio (FAR) of 9:1. In this district, a maximum FAR of 18:1 is permitted with TDR, and the project, as proposed, would have a FAR of 18:1. The proposed project's uses and density would be consistent with the C-3-O use district controls.

The project site is within the 550-S height and bulk district, which has a height limit of 550 feet; bulk limits for the lower and upper towers require setbacks so that the floor area decreases as the building height increases. At 355 feet, the proposed project would comply with the height limit. However, the project, as proposed, would require an exception due to the S bulk district controls, pursuant to *Planning Code* Section 309, for the upper tower portion of the building (above a height of 220 feet), which would exceed the maximum permitted floor area and diagonal plan dimension.

The project would require Planning Commission review and approval under Section 309, Permit Review in C-3 Districts, because the project would exceed 50,000 gross square feet and because the sponsor would seek exceptions, pursuant to Section 309, to the following *Planning Code* sections: bulk requirements (Section 270) because, as noted above, the project would exceed the *Code's* bulk limits at the upper tower; and requirement for separation of towers (Section 132.1)(c). The *Code* requirement, based on the building's 355-foot height, is a minimum tower setback of 19 feet from the centerline of adjacent street(s) and from interior property line(s). The project would have a setback of 15 feet from the eastern interior property line (adjacent to the building at 50 Beale Street), which would be penetrated by a 7.5-foot-deep mechanical element, and a setback of 7 feet from the northern interior property line (adjacent to the building at 45 Fremont Street). The project would comply with the setback requirement from abutting streets. 14

In addition, the project may seek an exception to the *Code's* ground-level wind current requirements (Section 148) if it is determined that the project would not reduce existing exceedances of the pedestrian wind speed criterion and/or would result in exceedances of both the pedestrian and seating comfort criteria. Section 309 also permits the imposition of certain conditions in regard to such matters as a project's siting and design; view, parking, traffic and transit effects; energy consumption; pedestrian environment; and other matters. The proposed project would also be subject to review and approval pursuant to *Planning Code* Section 321 (Office Development: Annual Limit) and Sections 146 and 295, concerning shadow impacts.

The project would be required to comply with the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 *et. seq.*), which would require that the project sponsor either fund the construction of 92 affordable housing units<sup>15</sup> or pay an in-lieu fee to the City in the amount of \$19.89 per gross square foot of office space.

The proposed project would provide on-site publicly accessible open space in the form of an indoor plaza within the ground floor and mezzanine (second) level of the building. *Planning Code* Sec. 138 requires

<sup>14</sup> The setbacks from Fremont and Mission Streets, each of which is 82 feet, 6 inches in width, would be more than 41 feet.

Based on 0.00027 housing units per gross square foot of office development and a project of 340,000 square feet of gross floor area, per Planning Code Section 313.5.

open space be provided at the rate of one square foot per 50 square feet of gross floor area in the C-3 Districts. The proposed project would include approximately 340,000 gross square feet and would thus be required to provide a total of about 6,800 square feet of open space. With 6,960 square feet of common usable open space in a publicly-accessible interior area, the project would exceed the *Planning Code's* open space requirement. The *Planning Code* considers such enclosed space that is available to the public to be "open space" for the purposes of this requirement.

Planning Code Section 151.1 permits off-street parking up to a maximum of 7 percent of building gross floor area for office uses in the C-3 Districts. The proposed floor area devoted to off-street parking would be 23,540 square feet, which would be within the permitted maximum amount, and the project would comply with Section 151.1. Planning Code Section 152.1 requires that the proposed project provide three off-street loading spaces. 16 However, Section 153(a)(6) allows the substitution in C-3 Districts of two service vehicle spaces for each required off-street freight loading space, provided that a minimum of 50 percent of the required number of spaces are provided for freight loading. The project proposes two full-size off-street loading spaces in the garage, along with two service vehicle spaces in the basement; together, these spaces would meet the *Planning Code* off-street loading requirement. The project would be subject to Planning Code Section 148 (ground-level wind current requirements) and Section 295 (shadow on certain public open spaces). Wind and shadow effects will be analyzed in the EIR. The project would also be subject to Planning Code Section 138.1, pedestrian streetscape improvements; Section 143, street trees, and Section 149, public art requirements; Section 139, downtown park fees; Section 163, transportation management and transportation brokerage services; Section 164, San Francisco Resident Placement and Training Program; Section 165, child care plans and child-care brokerage; Section 313 et. seq., Housing Requirements for Large-Scale Development Projects, and child care provision fees; Section 321, annual office development limit; as well as transit development impact fees under Article 38 of the Administrative Code. The project would also require building permits, which would require review and approval by the Planning Department and Department of Building Inspection. In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the *Planning Code* to establish eight Priority Policies. These policies, and the sections of this Environmental Evaluation addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Question 1c, Land Use); (3) preservation and enhancement of affordable housing (Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Questions 5a, b, and f, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Question 1c, Land Use); (6) maximization of earthquake preparedness (Questions 14 a-d, Geology and Soils); (7) landmark and historic building preservation (Question 4a, Cultural Resources); and (8) protection of open space (Questions 9 a and b, Wind and Shadow, and Questions 10a and c, Recreation). Prior to issuing a permit for any project which requires an Initial Study under the California Environmental Quality Act (CEQA), and prior to issuing a permit for

Calculation: 0.1 space per 10,000 sq. ft. of gross floor area (to closest whole number per Section 153). Thus,  $340,000 \div 10,000 \times 0.1 = 3.4$ , rounded to three spaces.

any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. As noted above, the consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in the Evaluation of Environmental Effects below and/or in the EIR, as applicable, providing information for use in the case report for the proposed project. The case report and approval motions for the project will contain the Department's comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

#### **PLANS AND POLICIES**

#### San Francisco General Plan

In addition to the *Planning Code* and zoning policies, the project site is subject to the *San Francisco General Plan (General Plan)*. The *General Plan* provides general policies and objectives to guide land use decisions. Any conflict between the proposed project and policies that relate to physical environmental issues are discussed in Section E, Evaluation of Environmental Effects. The compatibility of the proposed project with *General Plan* policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project. Any potential conflicts identified as part of the process would not alter the physical environmental effects of the proposed project. The EIR will contain a discussion of project consistency with applicable *General Plan* Objectives and Policies.

#### Other Plans

Environmental plans and policies, like the *Bay Area* 2005 Ozone Strategy and the Sustainability Plan for San Francisco, directly address physical environmental issues and/or contain standards or targets that must be met in order to preserve or improve specific components of the City's physical environment. In addition, the Planning Department is undertaking the Transit Center District Plan, which could affect development controls of and around the project site. The EIR will contain a discussion of project consistency with other applicable plans.

### D. SUMMARY OF ENVIRONMENTAL EFFECTS

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor. Those environmental topics for which the proposed project may result in a potentially significant impact (and which will therefore be discussed in the EIR) and for which mitigation would be required to reduce a significant impact to a less-than-significant level are indicated in the list below.

	Land Use	$\boxtimes$	Air Quality	Biological Resources
	Aesthetics	$\boxtimes$	Greenhouse Gas Emissions	Geology and Soils
	Population and Housing	$\boxtimes$	Wind and Shadow	Hydrology and Water Quality
$\boxtimes$	Cultural and Paleo. Resources		Recreation	Hazar ds/Hazardous Materials
$\boxtimes$	Transportation and Circulation		Utilities and Service Systems	Mineral/Energ y Resources
$\boxtimes$	Noise		Public Services	Agricultural and Forest Resources
				Mandatory Findings of Significance

# **E. EVALUATION OF ENVIRONMENTAL EFFECTS**

LAND USE AND LAND USE PLANNING—     Would the project:     Physically divide an established community?     Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program.		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
1.						
a)	Physically divide an established community?			$\boxtimes$		
b)	or regulation of an agency with jurisdiction over					
c)	Have a substantial impact upon the existing character of the vicinity?			$\boxtimes$		

Land use impacts are considered significant if they conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Land use impacts are also considered significant if they divide the physical arrangement of an established community, or if they have a substantial impact upon the existing character of the vicinity. As noted in the Project Description, the project site is located in the C-3-O, Downtown Commercial Office Use District. In San Francisco's compact downtown office core area, where the project site is located, land uses consist of primarily commercial office and retail uses. Additional land uses in the project vicinity include a scattering of residential buildings and several educational institutions, as well as restaurants and hotels, along with cultural institutions.

## Impact LU-1: The proposed project would not substantially conflict with or physically divide an established community. (Less than Significant)

The proposed project would demolish the existing four-story building on the project site and replace it with a 24-story, 355-foot-tall office tower. The new building would be consistent with existing uses on the project block and across Fremont Street, as office is the predominant use in the project vicinity. Although a new residential building, the Millennium, is located across Mission Street, the proposed 350 Mission Street project would not alter the existing land use pattern of the project site and vicinity. It is assumed that existing tenants in the building on the project site, including Heald College, a private two-year college, would relocate in the general area, should they so desire. Because the proposed project would not introduce new land uses to the project area and would be constructed within the existing street and block layout, it would not physically divide an established community and the impact would be less than significant. This topic will not be discussed further in the EIR.

Impact LU-2: The proposed project would be consistent with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

The proposed project would be consistent with the land use and density controls and with the height limit in the San Francisco Planning Code. As noted in the Project Description and in Section C, Compatibility with Existing Zoning and Plans, the proposed project would require exceptions to the Planning Code bulk limits for the building's upper tower. These exceptions may be granted pursuant to Planning Code Section 309, and they therefore do not represent an inconsistency with existing zoning or plans. Therefore the impact would be less than significant.

# Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity. (Less than Significant)

The proposed project would introduce a larger building at the project site than currently exists and would therefore increase the density of office space on the site. However, in the context of downtown San Francisco, and of the South Financial District in particular, the project would represent a small increment of additional office space that would not substantially alter the character of the area, which is dominated by office towers and represents the greatest concentration of office employment in the Bay Area. Therefore, the proposed project would not result in a substantial change in the character of the vicinity, and the impact would be less than significant.

Case No. 2006.1524E 19 350 Mission Street Impact LU-4: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would result in less-than-significant cumulative impacts to land use. (Less than Significant).

Implementation of the proposed project, in combination with the projects discussed in "Project Setting," above, would further increase office and residential development around the Transbay Terminal. The Planning Department is currently undertaking the Transit Center District Plan, which would require a programmatic evaluation of the environmental impact of the portion of these developments beyond existing controls. In addition, project-specific environmental review is required for each of the cumulative projects, as it is for the proposed 350 Mission Street project. The planned additional high-rise buildings in the project vicinity would not substantially and adversely alter the prevailing mix of land uses that is dominated by office development and includes residential, hotel, and cultural uses along with ground-floor retail and restaurants. The proposed project, in combination with cumulative development, would have a less-than-significant impact.

Based on the above, the proposed project would not result in a significant effect with respect to land use, either individually or cumulatively. However, the EIR will include a discussion of land use for informational purposes. The EIR will also include a discussion of the applicable planning and zoning as well as an evaluation of the project's consistency with such regulations, also for informational purposes. The EIR will also discuss the project's relationship to the Downtown Plan.

Тор	vics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
2.	AESTHETICS—Would the project:					
a)	Have a substantial adverse effect on a scenic vista?			$\boxtimes$		
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?				⊠	
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?			⊠		
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?					

Impact AE-1: The proposed project would have a less-than-substantial effect on scenic views and vistas. (Less than Significant)

The proposed project would alter views of the project site by increasing the scale of development from a four-story building to a 24-story, 355-foot-tall office tower (approximately 370 feet with mechanical equipment and screening of that equipment). Although the project would change the views available at the pedestrian level and from nearby streets and sidewalks, long-range views in the vicinity of the project site would not be altered, as the proposed project would not be tall enough to be visible over the existing buildings surrounding the site. In overall height, the proposed project would be about 50 feet taller than the building to the east (50 Beale Street), and would be shorter, by 100 feet to several hundred feet, than nearby buildings to the north (45 Fremont Street), east (50 Fremont Street, across Fremont street from the project site), and south (Millennium tower, across Mission Street). Together, these surrounding buildings, along with the 12-story mid-rise portion of the Millennium project at the southwest corner of Mission and Beale Streets, would serve to obstruct the proposed project from most mid- and long-range views, except for very partial views of the new building's edges from Mission and Fremont Streets. The one place where the project would be clearly visible from a block away or more would be Howard Street between Beale and Main Streets, where the proposed project would be visible over the mid-rise Millennium building (and, near Beale Street, between the two Millennium buildings). In these views, however, the project would appear against the backdrop of other existing high-rises, and would not obstruct scenic views, nor would the project contribute substantially to any significant cumulative impact with respect to scenic views.

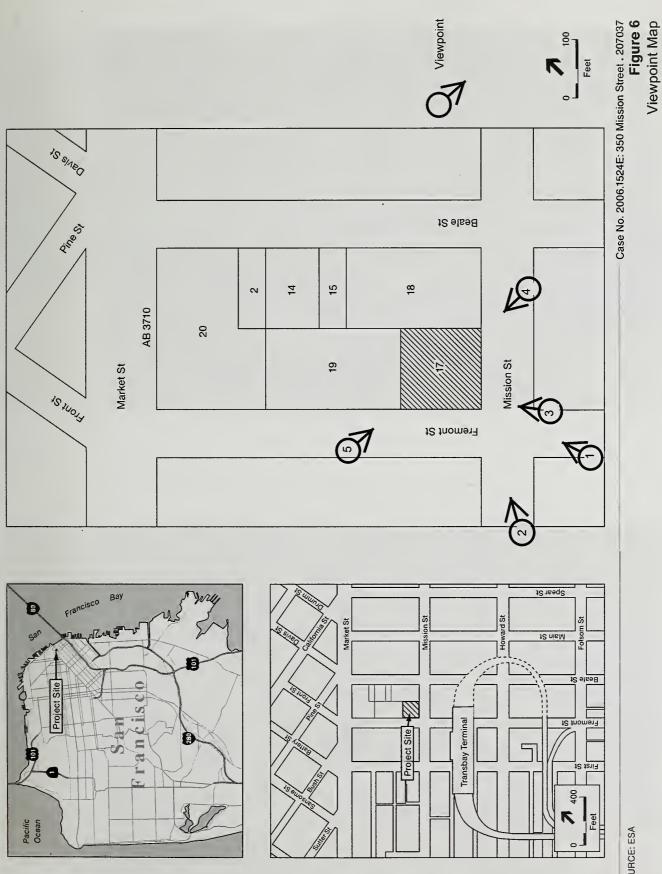
Figure 6 presents a map of viewpoints presented in this analysis. Figures 7 – 11, pp. 23--27, present a series of photographs from vantage points on the streets surrounding and near the site, along with photomontages depicting the proposed project. As seen in the figures, the project site is visible in short-range views from surrounding streets. Figures 7 and 8, pp. 23 and 24, show the project site, and a visual simulation of the proposed project, from locations about 200 feet south of the project site on Fremont Street and west of the site on Mission Street, respectively. From these locations, the proposed project would alter the view of the project site by replacing a building that is much smaller than surrounding structures with one that is comparable in height and mass to the nearby high-rises.

In the view looking southeast towards the site from Fremont Street between Mission and Market Streets (Figure 11, p. 27), the project would "fill in" an area where the sky is now visible over the existing building on the project site (this viewpoint is looking towards Howard Street between Beale and Main, described above). However, as with the view from Howard Street, the project would not obstruct or obscure any scenic vistas. This topic will not be discussed further in the EIR.

# Impact AE-2: The proposed project would not substantially damage any scenic resources. (No Impact).

No scenic resources exist on or adjacent to the project site. There would be no effect on scenic resources. This topic will not be discussed further in the EIR.

Case No. 2006.1524E 21 350 Mission Street



SOURCE: ESA



Simulation

Visual



Setting

SOURCE: Skidmore Owings & Merrill; Steel Blue LLC

Simulation

Visual



SOURCE: Skidmore Owings & Merrill; Steel Blue LLC

Existing



Existing

Setting



Visual

Simulation



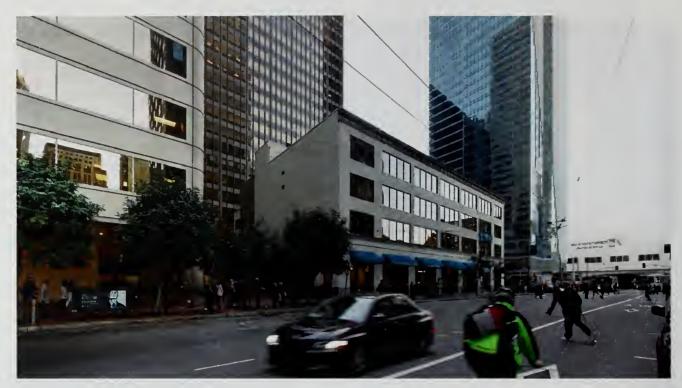
Existing

Setting



Visual

Simulation



Existing Setting



Visual

Simulation

Impact AE-3: The proposed project would result in a change to the existing character of the project site, but this change would not degrade the visual character or quality of the site and its surroundings. (Less than Significant).

The proposed project would alter the visual character of the project site by replacing a building that is much smaller than surrounding structures with one that is comparable in height and mass to the nearby high-rises. Moreover, the approximately 55-foot-tall ground floor and mezzanine (second level) would, together, present a five-story atrium that would represent a visual departure from the existing building by replacing the existing structure's traditional "punched" windows and storefronts with an open character. Figures 9 and 10, pp. 25 and 26, highlight this change by presenting closer-in views from across Mission Street, looking northeast and northwest, respectively, towards the project site. Although the proposed project would present a different character than the existing building, the change would not result in a negative impact to existing visual character that would be considered adverse.

Above the five-story atrium, the project's façade would be clad in a glass curtain wall, similar to many structures in the vicinity. The ground floor-and-mezzanine atrium would have large expanses of clear glass that would give it a substantially "open" appearance, and portions of the ground floor would be open to the sidewalk during the day, intended to further emphasize the "lightness" of this portion of the building, which would be the project's key design feature.

Because the proposed project would develop a building that would be comparable in height and mass to surrounding and nearby structures, because the proposed building would not obviously conflict with the design of other buildings in the vicinity, effects related to visual character would be less than significant. This topic will not be discussed further in the EIR.

Impact AE-4: The proposed project would create a new source of light and glare, but not to an extent that would adversely affect day or nighttime views in the area or which would substantially impact other people or properties. (Less than Significant).

While the project would result in some new night lighting, visible through project windows, such lighting would occur in an established urban downtown where night lighting already occurs. Exterior lighting at building entryways would be positioned to minimize glare. Thus, the changes in lighting would not be in excess of that commonly found and accepted in urban areas, and environmental effects of light and glare due to the project would not be significant. The project would comply with Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. Thus, the project would not produce glare affecting other properties. In view of the above, the project would not result in a significant light and glare impact.

In light of the above, effects related to aesthetics would not be significant, either individually or cumulatively, and this topic will not be discussed in the EIR.

Impact AE-5: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would result in less-than-significant impacts to aesthetic resources. (Less than Significant)

As stated under Impact AE-2, the proposed project would have no impact on scenic resources. Therefore, it would not make a substantial contribution to cumulative impacts to scenic resources.

Combined with cumulative development described in the "Project Setting," the proposed project would result in a change to the character of the project site vicinity and the area around the Transbay Terminal. However, this change would not result in a negative impact to existing visual character that would be considered adverse. Instead, it would continue the trend of gradual transition from the existing character of the project vicinity to the expansion of high-rise office buildings envisioned in the proposed Transit Center District Plan. From long-range views, the project would appear similar or smaller than a number of existing or planned high-rise buildings and would not significantly affect views. Therefore, the proposed project would not have significant cumulative aesthetic impacts. This topic will not be discussed further in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3.	POPULATION AND HOUSING— Would the project:					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?					
b)	Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?				×	
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?					

Impact PH-1: The proposed project would not induce substantial population growth in San Francisco, either directly or indirectly. (Less than Significant)

San Francisco consistently ranks as one of the most expensive housing markets in the United States. San Francisco is the central city in an attractive region known for its agreeable climate, open space and recreational opportunities, cultural amenities, strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support strong housing demands in the City. New housing to relieve the market pressure created by the strong demand is particularly difficult to provide in San Francisco because the amount of land available is limited, and because land and development costs

are high. Approximately 338,920 households resided in San Francisco in 2005. By 2030, San Francisco households are expected to increase to 400,700 households, an increase of more than 18 percent. 17 San Francisco's employment is projected to grow from about 553,090 employees in 2005 to about 748,100 employees in 2030, an increase of 35 percent. 18

The existing uses on the project site employ 150 people, and the existing school (Heald College) has an enrollment of approximately 800 daytime students and 400 evening/night students. The project would construct a new office building with approximately 362,600 square feet of office and restaurant/retail space (about 340,000 square feet of gross floor area, measured according to the Planning Code, and about 452,300 square feet of total building area). Demolition of the existing building on the site would potentially displace the existing employees who currently work on the site, although it can be assumed for purposes of a conservative assessment of employment that existing tenants in the building on the project site, including several retail tenants and Heald College, would relocate in the general area, should they so desire. At full occupancy, the project would house about 1,290 office employees and about 19 restaurant/retail employees. 19 Some of these would likely be new employees; some would relocate from other San Francisco office buildings. Therefore, project-related employment growth would constitute about 1.3 percent of citywide employment growth by the year 2025, assuming that all employees in the project would be new to San Francisco; in reality, some workers at the project will be likely to have relocated from other jobs in San Francisco. This potential increase in employment would be minimal in the context of the total employment in greater San Francisco.

Based on a nexus study prepared for the Jobs-Housing Linkage Program (*Planning Code Secs.* 313 et. seq.), the project would create a demand for about 441 new dwelling units in San Francisco, assuming that all employees at the project were new to San Francisco.<sup>20</sup> (As noted above, some workers at the project will be likely to have relocated from other jobs in San Francisco.)

This demand for 441 dwelling units would add to existing strong housing demand in the City. Housing demand in and of itself is not a physical environmental effect, but an imbalance between local employment and housing can lead to long commutes with traffic and air quality impacts. Traffic and air quality issues will both be analyzed in the EIR. Some employees of the project who could afford to purchase or rent market-rate housing in San Francisco would be likely to live in San Francisco, while others would choose to live elsewhere in the Bay Area. Many others would not be able to afford to live in the City. For example, based on Census 2000 data, the greatest number of workers living in San Francisco

<sup>17</sup> Association of Bay Area Governments (ABAG). Projections and Priorities 2009: Building Momentum.

<sup>18</sup> ABAG growth forecasts, cited in Note 17; San Francisco Planning Department growth forecasts, cited in Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, Case No. 2007.0946E; Draft EIR published November 12, 2009.

<sup>19</sup> Employment calculations in this section are based on the City of San Francisco Transportation Impact Analysis Guidelines, which estimate an average density of 350 square feet per employee assigned to restaurant/retail space (about 6,600 square feet of total floor area), and 276 square feet per employee assigned to office uses (about 356,000 square feet of total floor area).

<sup>&</sup>lt;sup>20</sup> This method uses the estimated project-related increase in employment (1,308 employees) by the fraction of San Francisco employees who live in the City (55%). This result, the approximate number of project-related employees who would live in the City (719), is divided by the average number of San Francisco workers in households where San Francisco workers reside (1.63). The estimated housing demand would be 440 units (3,308 x  $0.55 \div 1.63 = 441$ ).

Impact AE-5: The proposed project, in combination with past, present, and reasonably foreseeable future development in the site vicinity, would result in less-than-significant impacts to aesthetic resources. (Less than Significant)

As stated under Impact AE-2, the proposed project would have no impact on scenic resources. Therefore, it would not make a substantial contribution to cumulative impacts to scenic resources.

Combined with cumulative development described in the "Project Setting," the proposed project would result in a change to the character of the project site vicinity and the area around the Transbay Terminal. However, this change would not result in a negative impact to existing visual character that would be considered adverse. Instead, it would continue the trend of gradual transition from the existing character of the project vicinity to the expansion of high-rise office buildings envisioned in the proposed Transit Center District Plan . From long-range views, the project would appear similar or smaller than a number of existing or planned high-rise buildings and would not significantly affect views. Therefore, the proposed project would not have significant cumulative aesthetic impacts. This topic will not be discussed further in the EIR.

Тор	nics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3.	POPULATION AND HOUSING— Would the project:					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?					
b)	Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?				⊠	
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				⊠	

Impact PH-1: The proposed project would not induce substantial population growth in San Francisco, either directly or indirectly. (Less than Significant)

San Francisco consistently ranks as one of the most expensive housing markets in the United States. San Francisco is the central city in an attractive region known for its agreeable climate, open space and recreational opportunities, cultural amenities, strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support strong housing demands in the City. New housing to relieve the market pressure created by the strong demand is particularly difficult to provide in San Francisco because the amount of land available is limited, and because land and development costs

are high. Approximately 338,920 households resided in San Francisco in 2005. By 2030, San Francisco households are expected to increase to 400,700 households, an increase of more than 18 percent. San Francisco's employment is projected to grow from about 553,090 employees in 2005 to about 748,100 employees in 2030, an increase of 35 percent. 18

The existing uses on the project site employ 150 people, and the existing school (Heald College) has an enrollment of approximately 800 daytime students and 400 evening/night students. The project would construct a new office building with approximately 362,600 square feet of office and restaurant/retail space (about 340,000 square feet of gross floor area, measured according to the *Planning Code*, and about 452,300 square feet of total building area). Demolition of the existing building on the site would potentially displace the existing employees who currently work on the site, although it can be assumed for purposes of a conservative assessment of employment that existing tenants in the building on the project site, including several retail tenants and Heald College, would relocate in the general area, should they so desire. At full occupancy, the project would house about 1,290 office employees and about 19 restaurant/retail employees. Some of these would likely be new employees; some would relocate from other San Francisco office buildings. Therefore, project-related employment growth would constitute about 1.3 percent of citywide employment growth by the year 2025, assuming that all employees in the project would be new to San Francisco; in reality, some workers at the project will be likely to have relocated from other jobs in San Francisco. This potential increase in employment would be minimal in the context of the total employment in greater San Francisco.

Based on a nexus study prepared for the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 *et. seq.*), the project would create a demand for about 441 new dwelling units in San Francisco, assuming that all employees at the project were new to San Francisco.<sup>20</sup> (As noted above, some workers at the project will be likely to have relocated from other jobs in San Francisco.)

This demand for 441 dwelling units would add to existing strong housing demand in the City. Housing demand in and of itself is not a physical environmental effect, but an imbalance between local employment and housing can lead to long commutes with traffic and air quality impacts. Traffic and air quality issues will both be analyzed in the EIR. Some employees of the project who could afford to purchase or rent market-rate housing in San Francisco would be likely to live in San Francisco, while others would choose to live elsewhere in the Bay Area. Many others would not be able to afford to live in the City. For example, based on Census 2000 data, the greatest number of workers living in San Francisco

<sup>17</sup> Association of Bay Area Governments (ABAG). Projections and Priorities 2009: Building Momentum.

ABAG growth forecasts, cited in Note 17; San Francisco Planning Department growth forecasts, cited in Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, Case No. 2007.0946E; Draft EIR published November 12, 2009.

<sup>19</sup> Employment calculations in this section are based on the City of San Francisco *Transportation Impact Analysis Guidelines*, which estimate an average density of 350 square feet per employee assigned to restaurant/retail space (about 6,600 square feet of total floor area), and 276 square feet per employee assigned to office uses (about 356,000 square feet of total floor area).

This method uses the estimated project-related increase in employment (1,308 employees) by the fraction of San Francisco employees who live in the City (55%). This result, the approximate number of project-related employees who would live in the City (719), is divided by the average number of San Francisco workers in households where San Francisco workers reside (1.63). The estimated housing demand would be 440 units (3,308 x 0.55 ÷ 1.63 = 441).

worked in office and administrative support capacities, and these employees had a median annual wage of just over \$38,000. On the other hand, the second largest number of workers living in San Francisco were in management occupations, earning a median of more than \$111,000.<sup>21</sup> Employees who could not afford market-rate housing would be forced to look for housing elsewhere, and would not have the option of living nearby (unless, for example, they chose to live in crowded conditions with others). This diminished housing choice could have physical implications, such as longer commutes that would generate more traffic and more pollutant emissions. The proposed project would be required to comply with the Jobs-Housing Linkage Program (*Planning Code* Secs. 313 et. seq.), which would require that the project sponsor either fund the construction of 92 affordable housing units<sup>22</sup> or pay an in-lieu fee to the City in the amount of \$19.89 per gross square foot of office space, or approximately \$8.57 million, or to employ a combination of housing construction and in-lieu fee. Compliance with the Jobs-Housing Linkage Program would not fully meet the increased demand for affordable housing that would be generated by the proposed project. However, the Jobs-Housing Linkage Program would substantially reduce the affordable housing demand that the project would otherwise generate, rendering any potential project impact less than significant, both individually and cumulatively.

In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development in other nearby areas that might not occur if the project were not approved and implemented, particularly if the project would facilitate growth by removing a major obstacle to development in a particular area (such as by provision of major new public services to an area where those services are not currently available). The proposed project would consist of development of a single office tower on a site currently in a heavily developed area of downtown San Francisco, in a manner consistent with the Downtown Plan and existing zoning on the site. The proposed project would not necessitate or induce the extension of municipal infrastructure. The project would be constructed in an area that makes up the City's South Financial District and has also been the location of other recent office and residential development. As such, the proposed project would not be expected to substantially alter development patterns in Downtown or elsewhere in San Francisco. The site is also near the focus of continuing high-density residential development on Rincon Hill and planned development in the Transbay Redevelopment Area. As a result, the project could potentially provide employment for some nearby residents.

The proposed project would consist of infill in a developed urban area, with services and transit available, and could be considered a response to the increasing mixed-use character of the project vicinity, as much as a potential inducement to further growth. To the extent that employees in the project's new office tower were to live nearby, the project would result in substantially less impact on transportation systems and air quality than would development of a similar amount of office space in a more outlying part of the Bay Area where fewer services and less transit access is provided. Moreover,

<sup>21</sup> Hausrath Economics Group, Eastern Neighborhoods Rezoning: Socioeconomic Analysis, Draft for Public Review, March 2007. Available on the internet at:

<a href="http://www.sfgov.org/site/uploadedfiles/planning/Citywide/pdf/SEIA">http://www.sfgov.org/site/uploadedfiles/planning/Citywide/pdf/SEIA</a> DRAFT for Public Review.pdf.

<sup>&</sup>lt;sup>22</sup> Based on 0.00027 housing units per gross square foot of office development and a project of 340,000 square feet of gross floor area, per *Planning Code* Section 313.5.

the proposed project would be developed in an existing established employment center—downtown San Francisco—that is served by existing infrastructure, including transit. That is, the project would not create a substantial concentration of new employment in an area that is lacking basic services that would have to be newly provided for.

In view of the above, there is no reason to conclude that the project would result in substantial additional development in the project site vicinity that would not otherwise occur, and the project thus would not result in substantial inducement to further growth. This topic will not be discussed further in the EIR.

Impact PH-2: The proposed project would not displace substantial numbers of people or existing housing units or create demand for additional housing, necessitating the construction of replacement housing. (No Impact)

No housing exists on the project site, and thus the project would not displace any housing units or create the need for replacement housing. This topic will not be discussed further in the EIR.

Impact PH-3: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would have a less-than-significant impact on population and housing. (Less than Significant).

Although the proposed project would increase the daytime population of the site compared to existing conditions, this increase would not be considered substantial, for the reasons discussed above. As also discussed above, the proposed project would not displace substantial numbers of people or existing housing units. Cumulative development in the project vicinity would be primarily commercial office development, as envisioned in the Transit Center District Plan and described in "Project Setting," above. Similarly, this cumulative office development (separate from the proposed project) would not displace substantial numbers of people or housing units. This cumulative office development could increase housing demand in the greater San Francisco area.

Therefore, the impact on population and housing would not be considered a significant effect, nor would the project contribute to any potential cumulative effects related to population and housing. This issue will not be discussed in the EIR.

Тор	oics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
4.	CULTURAL RESOURCES— Would the project:					
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code?					
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?					
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					
d)	Disturb any human remains, including those interred outside of formal cemeteries?					

Impact CP-1: The proposed project would demolish the existing building at 350 Mission Street, which is not considered historically significant for the purposes of CEQA, and would have a less-than-significant impact on historic architectural resources. (Less than Significant)

The existing building on the project site is a Category V, Unrated, building in the Downtown Plan and in Article 11 of the *Planning Code*. The building was evaluated as part of the historical resources background study for the proposed Transit Center District Plan; a summary of that evaluation is presented here.<sup>23</sup>

The 350 Mission Street building was designed by noted architect George Applegarth, and built in 1923, on behalf of a family owned real estate firm, the Cebrian Company, which had been founded by Edward and Louis Cebrian. The building was apparently built as a speculative real estate venture, and it was subsequently occupied by textile companies such as the pattern-maker Butterick Company, and by publishing house offices such as that of the MacMillan Company.

Architect George Applegarth, trained at the Ecole des Beaux-Arts in Paris, was responsible for such important San Francisco buildings as the Palace of the Legion of Honor in Lincoln Park and the Clift Hotel. Much later in his illustrious career, he designed the first double-spiral ramp, multi-story, self-parking structure in San Francisco, the Downtown Center Garage at O'Farrell and Mason streets, in 1953. Applegarth is best-known for his Beaux-Arts influenced designs for several large single-family homes in prestigious neighborhoods such as Presidio Terrace and Presidio Heights.

Although the 350 Mission Street building is associated with an important architect, the evaluation concluded that the building does not appear to be eligible for the California Register or for designation at the local level due to the extensive alterations that have occurred since its construction, including

<sup>23</sup> Kelley & VerPlanck Historical Resources Consulting, Transit Center District Survey, San Francisco, California. Final Report, September 11, 2008. Prepared for the San Francisco Planning Department. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2006.1524E.

replacement of all the upper-story windows and installation of anodized aluminum storefronts. According to the report, "the building is not associated with any significant events or persons," and because of the remodeling, "the building is no longer representative of its type: a concrete loft building of the 1920s. Due to the extent of the alterations, the building no longer retains sufficient integrity to convey its original appearance." Thus, the 350 Mission Street building is not considered a historical resource for purposes of CEQA.

The existing eastern boundary the New Montgomery-Second Street Conservation District is between First Street and Second Street, two blocks east of the project site. As part of the Transit Center District Plan, the Conservation District's boundaries are proposed to be modified, including through an expansion eastward to encompass additional parcels along Mission Street and Natoma Street. The Conservation District would be renamed as the "New Montgomery-Mission-Second Street (NMMS) Conservation District." The 350 Mission project site is not within the existing district or the proposed expansion.

Because the existing 350 Mission Street building is not considered a historical resource under CEQA, and because the project site is not within an existing or proposed historic district, the proposed project would have a less-than-significant effect on historical resources. This topic will not be discussed further in the EIR.

Impact CP-2: The proposed project would result in damage to, or destruction of, as-yet unknown archaeological or human remains, should such remains exist beneath the project site. (Potentially Significant)

The existing building occupies the entire project site. It has a single basement level, with the top of the floor slab about 9 feet below sidewalk grade. The soil beneath the basement slab generally consists of up to 13 to 17 feet of undocumented fill (i.e., fill placed during the original reclamation of the site from San Francisco Bay, in the 19th century, when placement of fill was substantially unregulated). Beneath the fill is a layer of so-called Bay Mud, to a depth of about 50 feet below grade, which is below the maximum level of proposed excavation. Groundwater is very shallow, at a depth of less than 10 feet below grade. <sup>24</sup>

An archeological research design and treatment plan (ARD/TP)<sup>25</sup> has been prepared for the proposed Transit Center District Plan. The ARD/TP included an individual archaeological sensitivity analysis of the project site; its findings are summarized in this section. The assessment includes a discussion of archival investigation, a determination of archaeological sensitivity, and a summary of recommendations. It is summarized below.

Case No. 2006.1524E 34 350 Mission Street

<sup>24</sup> Treadwell & Rollo, Geotechnical Investigation, 350 Mission Street, San Francisco, California, August 21, 2008. A copy of this report is available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1524E.

<sup>&</sup>lt;sup>25</sup> Far Western Anthropological Research Group, Inc. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. February 2010.

In November 2008, four cores were excavated to depths ranging from approximately 9 feet to 24 feet below basement surface. The cores documented the artificial fill, containing primarily sand, rubble, and historic-era artifacts, to a maximum depth of approximately 13.5 feet below basement surface. The artificial fill was underlain by bay mud deposits to at least 24 feet below basement surface. No prehistoric archaeological resources were encountered in any of the cores. In addition, the site was historically situated within bay waters and was partially submerged until 1854, and pre-bay terrestrial surface has been eroded. Therefore, the project site has a low potential for buried prehistoric archaeological resources.

Prior to 1849, the block bounded by Market Street, Beale Street, Mission Street, and Fremont Street (including the project site), was submerged. The entire block was filled by 1854, and by 1868, the project site vicinity was populated with foundries and machine shops. The project site was occupied by Henry's machine shop by 1877. The complex was destroyed in the 1906 earthquake, and the project site remained vacant until completion of construction of the current building in 1923 (see **Impact CP-1**, above).

Previous archaeological investigations immediately north of the project site during the 1970s revealed a Gold Rush-era dump. The material was sited approximately 13 to 20 feet below street level. Some of these deposits may extend into the project site subsurface. These potential archeological resources would have to be exposed and documented before a final assessment of their historical significance can be made. Therefore, the project would have the potential to adversely impact CEQA-significant archaeological resources.

Implementation of Mitigation Measure M-CP-2 would reduce the impact to archaeological resources to a less-than-significant level. This topic will not be discussed further in the EIR.

### Mitigation Measure M-CP-2—Archaeological Resources

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Transit Center District Plan archeological research design and treatment plan (Far Western Anthropological Research Group, Inc., Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California, February 2010) at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a

less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) and (c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program (AMP) shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence
  of the presence of the expected resource(s), of how to identify the evidence of the expected
  resource(s), and of the appropriate protocol in the event of apparent discovery of an
  archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation

with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;

- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations.
- Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
- Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
- Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.

- Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- Final Report. Description of proposed report format and distribution of results.
- *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Impact with Mitigation Incorporation: Less than Significant.

Impact CP-3: The proposed project would result in a less-than-significant impact to paleontological resources. (Less than Significant)

There are no known paleontological resources at the project site. As described more fully in Section E.13, Geology and Soils, the project site is underlain to the proposed depth of excavation primarily by artificial

fill and marine deposits. The fill does not typically contain paleontological resources (fossils), and the marine deposits are relatively young in age and thus are unlikely to contain rare or important fossilized remains. Therefore, the project would not result in any adverse effects on paleontological resources. This topic will not be discussed further in the EIR.

Impact CP-4: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, would result in less-than-significant cumulative impacts to cultural resources. (Less than Significant)

Given that the 350 Mission Street building is not considered a historical resource for purposes of CEQA, the proposed project would not considerably contribute to a cumulative impact to historic architectural resources. In addition, as stated under Impact CP-3, above, there are no known paleontological resources at the project site, and the underlying fill is not of the type that would typically contain paleontological resources. Therefore, the proposed project would not considerably contribute to any cumulative impact to paleontological resources.

Cumulative development in the project vicinity described in the "Project Setting" that could potentially impact archaeological resources would be required to implement mitigation measures similar to those of the proposed project, reducing their project-specific impacts to less-than-significant levels. In combination with the proposed project, these individually less-than-significant impacts, when combined, would not result in a significant cumulative impact to archaeological resources. This topic will not be discussed further in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
5.	TRANSPORTATION AND CIRCULATION— Would the project:					
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?					
b)	Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, established by the county congestion management agency for designated roads or highways?					

Тор	oics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
c)	Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?					⊠
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?					
e)	Result in inadequate emergency access?	$\boxtimes$				
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes?					

The proposed project would not result in a change in air traffic patterns, and thus would not result in substantial safety risks related to air traffic. Therefore, topic 5c is not applicable to the proposed project.

Impact TR-1: The proposed project could conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (Potentially Significant)

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Impacts TR-2: The proposed project could conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, established by the county congestion management agency for designated roads or highways. (Potentially Significant)

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Impacts TR-3: The proposed project could result in substantially increased hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses. (Potentially Significant)

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Impacts TR-4: The proposed project could result in inadequate emergency access. (Potentially Significant)

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Impacts TR-5: The proposed project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, or cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity or alternative travel modes. (Potentially Significant)

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Impacts TR-6: The proposed project, in combination of past, present, and reasonably foreseeable future projects, could result is significant cumulative impacts. (Potentially Significant).

The introduction of intensified office and retail/restaurant use, and the trips generated by those uses, would result in increased demand on the local transportation system, including increased transit demand, parking demand and traffic, which could result in significant transportation impacts.

Project effects on transportation and circulation, including intersection operations, transit demand and impacts on pedestrian and bicycle circulation, parking and freight loading, as well as construction impacts, will be analyzed in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6.	NOISE—Would the project:					
a)	Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			⊠		
b)	Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		⊠			
e)	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?					
f)	For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?					
g)	Be substantially affected by existing noise levels?					

The project site is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore, topics 6e and 6f are not applicable.

Impact NO-1: The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity, and it would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance. (Less than Significant).

The Environmental Protection Element of the *San Francisco General Plan* contains Land Use Compatibility Guidelines for Community Noise. <sup>26</sup> These guidelines, which are similar to state guidelines promulgated by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various newly developed land uses. For office uses, the maximum "satisfactory" noise level without incorporating noise insulation into a project is 70 dBA (Ldn), while the guidelines indicate that office development should be discouraged at noise levels above 75 dBA (Ldn). <sup>27</sup> Where noise levels that exceed

<sup>&</sup>lt;sup>26</sup> San Francisco General Plan, Environmental Protection Element, Policy 11.1.

Sound pressure is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 dB to 140 dB corresponding to the threshold of pain. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Owing to the variation in sensitivity of the human ear to various frequencies, sound is "weighted" to emphasize

satisfactory level (i.e., 70 dBA), a detailed analysis of noise reduction requirements will normally be necessary prior to final review and approval. Based on modeling of traffic noise volumes conducted by the San Francisco Department of Public Health, <sup>28</sup> the traffic noise level in the project area vicinity is up to about 79 dBA (Ldn) on Fremont Street. A 24-hour noise measurement at the project site Fremont Street side found that existing noise levels are 76.5 dBA (Ldn), with a daytime (7:00 a.m. to 10:00 p.m. noise level of 73.3 dBA (Leq). Hourly noise levels ranged from 63.8 dBA at 3:00 a.m. hour. to 77.4 dBA during the 8:00 a.m. hour. Given that the proposed project would contain office and retail/restaurant uses, which are not considered sensitive receptors for noise, it is anticipated that conventional construction techniques, including the use of noise-insulated glass, would result in reduction of interior noise levels of up to 30 dBA, resulting in levels adequate for the proposed uses. Accordingly, the impact of interior noise on the proposed project would be less-than-significant, and no further analysis is required.

*Traffic Noise.* Generally, traffic must double in volume to produce a noticeable increase in noise levels. Based on trip generation calculations prepared for the project, most trips to the project site would be made via transit and by foot. The project would generate 72 new vehicle trips during the p.m. peak hour. These additional trips, as well as cumulative traffic growth, would not double traffic volumes on area streets. Therefore, the project would not cause a noticeable increase in the ambient noise level in the project vicinity, nor would the project contribute considerably to any potential cumulative noise effects.

Operational Noise. The proposed project would include mechanical equipment, such as air conditioning units and chillers, which could produce operational noise. These operations would be subject to Section 2909 of the San Francisco Noise Ordinance, Article 29 of the San Francisco Police Code. As amended in November 2008, this section establishes a noise limit from mechanical sources, such as building equipment, specified as a certain noise level in excess of the ambient noise level at the property line: for noise generated by residential uses, the limit is 5 dBA in excess of ambient, while for noise generated by commercial and industrial uses, the limit is 8 dBA in excess of ambient and for noise on public property, including streets, the limit is 10 dBA in excess of ambient.<sup>29</sup> In addition, the Noise Ordinance provides for a separate fixed-source noise limit for residential interiors of 45 dBA at night and 55 dBA during the day and evening hours. Compliance with Article 29, Section 2909, would minimize noise from building operations. Therefore, operational noise would not be significant. This topic will not be discussed further in the EIR.

Impact NO-2: During construction, the proposed project would result in a temporary or periodic increase in ambient noise levels and vibration in the project vicinity above levels existing without the project. (Potentially Significant)

frequencies to which the ear is more sensitive, in a method known as A-weighting and expressed in units of A-weighted decibels (dBA).

<sup>&</sup>lt;sup>28</sup> Traffic noise map presented on DPH website: <a href="http://www.sfdph.org/dph/EH/Noise/default.asp">http://www.sfdph.org/dph/EH/Noise/default.asp</a>.

<sup>&</sup>lt;sup>29</sup> Entertainment venues are also subject to a separate criterion for low-frequency (bass) noise.

Demolition, excavation, and building construction would temporarily increase noise in the project vicinity. Construction equipment would generate noise and possibly vibrations that could be considered an annoyance by occupants of nearby properties. According to the project sponsor, the construction period would last approximately 22 months beginning in late 2010. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers. Impacts would generally be limited to the period during which new foundations and exterior structural and facade elements would be constructed. Interior construction noise would be substantially reduced by the presence of exterior walls.

As stated in the project description, the project is proposed to be constructed on a mat foundation, and thus pile-driving would not be required. Should the foundation concept be revised and a pile-supported foundation be proposed, or should pile-driving otherwise be required, noise impacts could be significant. Pile driving can generate noise levels in excess of 100 dBA at 50 feet each time the hammer strikes the pile. While potentially more startling than constant noise levels, pile driving noise is intermittent, occurring only when a pile is being driven, with breaks when driving one pile is complete and another is being placed in position. In the event that pile driving is determined to be required, the project sponsor would implement Mitigation Measure M-NO-2a (Noise Control Measures for Pile Driving), p. 46, which would reduce potential pile-driving noise impacts to a less-than-significant level. Moreover, as noted, the project sponsor would be required to comply with measures required for impact tools in Section 2907(b) of the *Police Code*. As a result, adverse impacts from construction noise upon sensitive receptors near the project site would be reduced to a less-than-significant level.

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the *Police Code*), amended in November 2008. The ordinance requires that noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA at a distance of 100 feet from the source. Impact tools (jackhammers, hoerammers, impact wrenches) must have both intake and exhaust mufflers as well as be equipped with acoustically attenuating shields or shrouds to the satisfaction of the Director of Public Works or the Director of Building Inspection. Section 2908 of the Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works or the Director of Building Inspection. The project must comply with regulations set forth in the Noise Ordinance.

The closest sensitive noise receptors to the project site that have the potential to be adversely affected by construction noise are the residential units in the Millennium Tower, across Mission Street from the project site, and a child care facility located about one block away, in the PG&E building at 77 Beale Street. Closed windows typically can reduce daytime interior noise levels to an acceptable level. Nevertheless, because of the proximity to these receptors, implementation of Mitigation Measure M-NO-2b (General Construction Noise Control Measures), p. 46, would be required to reduce construction noise to a less-than-significant level. Therefore, although construction noise could be annoying at times, with mitigation, construction noise would not be expected to exceed noise levels commonly experienced in an urban environment, and would not be considered significant.

To the extent that other construction projects are proposed or undertaken in close enough proximity to the project site such that cumulative effects related to construction noise would be anticipated, noise effects would be greater or last longer, or both. The project site is across the street from the planned new Transit Center (replacement for the Transbay Terminal) and is within the area of the proposed Transit Center District Plan, which could facilitate construction of several additional high-rise buildings. Additionally, the proposed underground extension of Caltrain service to the Transit Center, while it would occur beneath Second Street (two blocks east of the project site) would cause additional noise and vibration impacts if it is funded and built.

Construction of the planned new Transit Center is anticipated to begin in 2012, meaning that construction of the proposed 350 Mission Street project could overlap with work on the Transit Center. However, the earlier stages of construction of a high-rise building, such as excavation and foundation construction, are typically the noisiest, and these stages of the proposed project could be complete prior to the start of work on the Transit Center. The proposed 1,000-foot-tall Transit Tower, which would be built diagonally across the Mission/Fremont Street intersection from the project site, does not currently have a defined construction schedule, and construction of that project and the 350 Mission Street project is unlikely to occur concurrently.

The Transit Center District Plan envisions at least half a dozen additional new buildings within about 500 feet of the project site, and two of these projects—at 181 Fremont Street and at 50 First Street—have developers actively pursuing entitlements, while the others do not. If construction on either of these projects were to overlap with work on the 350 Mission Street project, noise levels could intermittently be increased, compared to construction on a single project. Other potential projects in the Transit Center District area would be too far from the 350 Mission Street site to result in substantial overlap with regard to construction noise, even if they were to proceed concurrently with the proposed project.

The construction of the proposed Caltrain Downtown Extension would temporarily introduce a new source of noise and vibration into the project area. However, this work would be underground and more than 500 feet from the project site, and therefore would not contribute to cumulative impacts from the 350 Mission Street project.

In the event that one or more nearby projects were to be undertaken at the same time as the proposed project, the Planning Department and the Departments of Building Inspection, Public Works, and Public Health, along with the Transbay Joint Powers Authority (sponsor of the Transit Center) and the Peninsula Joint Powers Board (sponsor of the Caltrain extension), would be expected to work to ensure that all projects comply with the San Francisco Noise Ordinance and that project construction schedules are coordinated so as to minimize, to the extent feasible, construction noise that could be disruptive.

Mitigation Measure M-NO-2c, p. 47, would ensure that construction noise from various projects in the area is reduced to the maximum extent feasible. This topic will not be discussed further in the EIR.

#### Mitigation Measure M-NO-2a: Noise Control Measures for Pile Driving

- Should pile-driving be necessary for the proposed project, the project sponsor would require that the project contractor pre-drill holes (if feasible based on soils) for piles to the maximum feasible depth to minimize noise and vibration from pile driving.
- Should pile-driving be necessary for the proposed project, the project sponsor would require that the construction contractor limit pile driving activity to result in the least disturbance to neighboring uses. Any nighttime work would require a work permit from the Director of Public Works or the Director of Building Inspection pursuant to San Francisco Noise Ordinance Section 2908.

#### Mitigation Measure M-NO-2b: General Construction Noise Control Measures

To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project sponsor would undertake the following:

- The project sponsor would require the general contractor to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- The project sponsor would require the general contractor to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as five dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.
- The project sponsor would require the general contractor to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.
- The project sponsor would include noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible.
- Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include (1) a procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of neighboring residents and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.

#### Mitigation Measure M-NO-2c: Cumulative Constriction Noise Control Measures

• In addition to implementation of Mitigation Measure NO-2a and Mitigation Measure NO-2b (as applicable), prior to the time that construction of the proposed project is completed, the project sponsor would cooperate with and participate in any City-sponsored construction noise control program for the Transit Center District Plan area or other City-sponsored areawide program developed to reduce potential effects of construction noise in the project vicinity. Elements of such a program could include a community liaison program to inform residents and building occupants of upcoming construction activities and, potentially, noise and/or vibration monitoring during construction activities that are anticipated to be particularly disruptive.

Impact with Mitigation Incorporation: Less than Significant.

# Impact NO -3: The proposed project would not be substantially affected by existing noise levels. (Less than Significant)

Ambient noise levels in the project vicinity are typical of noise levels in Downtown San Francisco, which are dominated by vehicular traffic, including trucks, cars, Muni buses, and emergency vehicles. Mission and Fremont Streets both experience relatively heavy traffic and generate moderate to high levels of traffic noise. Observation during weekday business hours by the environmental consultant indicates that surrounding land uses do not conduct noticeably noisy operations.

With regard to effects of the ambient area noise on project occupants, the proposed project would include a noise-reducing dual-pane glass assembly in its glazing system, which would reduce outdoor noise levels by up to 30 dBA, sufficient to ensure an adequately quiet interior noise environment for office use. The DBI would review the final building plans to ensure that the building wall and floor/ceiling assemblies for the development meet State standards regarding sound transmission. This would avoid any significant effect on project occupants. Because surrounding land uses do not generate substantial noise, no adverse effect on project occupants due to ambient noise is anticipated. This topic will not be discussed further in the EIR.

## Impact NO-4: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would result in less-than-significant cumulative noise impacts.

As noted above, several other high-rise and/or sizable projects are proposed within the project vicinity, including the planned 1,000-foot-tall Transit Tower diagonally across the intersection of Fremont and Mission Streets from the project site and the planned new Transbay Transit Center itself. Depending on schedules, there could be overlap in construction of one or more project(s) and the proposed 350 Mission Street project. However, each project would be required to implement mitigation and other noise control measures, and therefore construction noise would be reduced to the maximum extent feasible. Moreover, for each project, the period of noisiest activity would be much less lengthy than the duration of the entire construction period, substantially reducing the potential for overlap between projects' phases of

maximum construction noise. Given this, and given that the proposed 350 Mission Street project would not include pile-driving, which is typically the most disruptive activity in terms of construction noise, the proposed project would not contribute considerably to any potential cumulative construction noise impacts.

Concerning operational noise, project traffic would not make a considerable contribution to either existing or future cumulative traffic volumes such that traffic noise would perceptibly increase. Likewise, noise generated by operation of the proposed 350 Mission Street building would not make a substantial contribution to ambient noise levels in the vicinity. Therefore, the proposed project would not result in a cumulative effect on operational noise. This topic, cumulative noise impacts, will not be discussed further in the EIR.

	<del></del>					
<u>Тор</u> 7.	AIR QUALITY Where available, the significance criteria establishe				No Impact or air polluti	Not Applicable
	district may be relied upon to make the following de	eterminations.	Would the proje	ect:		
a)	Conflict with or obstruct implementation of the applicable air quality plan?					
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					
d)	Expose sensitive receptors to substantial pollutant concentrations?	⊠				
e)	Create objectionable odors affecting a substantial number of people?			⊠		

Impact AQ-1: Implementation of the proposed project would result in conflict or obstruction of the local applicable air quality plan. (Potentially Significant)

The EIR will evaluate the proposed project's air quality impacts related to local air quality plans.

Impact AQ-2: Implementation of the proposed project could violate an air quality standard or contribute substantially to an existing or projected air quality violation. (Potentially Significant).

The EIR will evaluate the proposed project's air quality impacts related to air quality standards and existing or project air quality violations.

Impact AQ-3: Implementation of the proposed project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (Potentially Significant).

The EIR will evaluate the proposed project's air quality impacts associated with criteria pollutant emissions and ambient air quality standards.

Impact AQ-4: Implementation of the proposed project could expose sensitive receptors to substantial pollutant concentrations. (Potentially Significant).

The EIR will evaluate the proposed project's air quality impacts related to exposure of pollutant concentrations to sensitive receptors.

Impact AQ-5: The proposed project would not create objectionable odors affecting a substantial number of people. (Less than Significant)

The project would not result in a perceptible increase or change in odors on the project site or in the vicinity of the project, as it would not include uses prone to generation of odors. Observation indicates that surrounding land uses are not sources of noticeable odors, and therefore would not adversely affect project occupants. This topic will not be further discussed in the EIR.

Impact AQ-6: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable future projects in the vicinity, could result in cumulative air quality impacts. (Potentially Significant).

Emissions generated by the proposed project could result in significant cumulative air quality impacts. Project effects on air quality will be analyzed in the EIR.

Case No. 2006.1524E 49 350 Mission Street

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable				
8.	GREENHOUSE GAS EMISSIONS— Would the project:									
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?									
b)	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?									
	pact GG-1: The proposed project would a ald have a significant impact on the envi		•	•	use gas e	missions that				
	The proposed project would generate construction-, operation, and traffic-related greenhouse gas emissions. The proposed project's impacts related to greenhouse gases will be evaluated in the EIR.									
Im	pact GG-2: The proposed project would:	result in the	e generation	of greenho	use gas e	missions,				
wh pu	pact GG-2: The proposed project would thich could conflict with applicable plans, rpose of reducing such emissions.  The proposed project's impacts related to great the proposed project would be proposed project would be proposed project would be proposed project.	, policies, o	regulations	of an agend	cy adopto					
wh pu	nich could conflict with applicable plans, rpose of reducing such emissions.  The proposed project's impacts related to gree to the project of the proposed project's impacts related to gree to the project of the proj	, policies, o	regulations	of an agend	cy adopto					
wh pu Th	nich could conflict with applicable plans, rpose of reducing such emissions.  The proposed project's impacts related to gree to the project of the proposed project's impacts related to gree to the project of the proj	policies, or polic	regulations uses will be even  Less Than Significant with Mitigation	of an agend valuated in Less Than Significant	cy adopto the EIR.	ed for the				
wh pu Th	rich could conflict with applicable plans, rpose of reducing such emissions.  e proposed project's impacts related to green	policies, or polic	regulations uses will be even  Less Than Significant with Mitigation	of an agend valuated in Less Than Significant	cy adopto the EIR.	ed for the				
wh pu Th	ics:  WIND AND SHADOW—Would the project:  Alter wind in a manner that substantially affects	Potentially Significant	Less Than Significant with Mitigation Incorporated	of an agend valuated in Less Than Significant Impact	the EIR.	Not Applicable				
wh pu Th  7ορ 9. a) b)	ics:  WIND AND SHADOW—Would the project:  Alter wind in a manner that substantially affects public areas?  Create new shadow in a manner that substantially affects outdoor recreation facilities	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	of an agend valuated in  Less Than Significant Impact	the EIR.	Not Applicable				

wind speeds," which are speeds exceeded 10 percent of the time. The hazard criterion is an equivalent wind speed of 26 mph for a full hour, or approximately 0.0114 percent of the time, not to be exceeded more than once during the year. The EIR will evaluate whether the proposed project would result in exceedances of the comfort and hazard criteria.

Impact WS-2: The proposed project would create new shadow in a manner that could substantially affect outdoor recreation facilities or other public areas. (Potentially Significant)

b. Shadow. Section 295 of the *Planning Code* was adopted in response to Proposition K (passed November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Department by any structure exceeding 40 feet unless the Planning Commission finds the impact to be insignificant. The closest public open space in the vicinity of the project site that falls under the jurisdiction of the Recreation and Park Department is Justin Herman Plaza, located along The Embarcadero north and south of Market Street. Additional Recreation and Park Department properties are within one mile of the project site. To determine whether this project would conform with Section 295 of the *Planning Code*, a shadow fan analysis was prepared by the Planning Department which found—without considering other nearby buildings—that the project could potentially cast new shadow on Justin Herman Plaza. On In addition, the project could add new shadow to privately owned, publicly accessible open spaces and sidewalks in the vicinity, as well as to the planned park on the top of the Transbay Transit Center. A detailed shadow study will be completed and the results will be discussed in the EIR.

Impact WS-3: The proposed project, in combination with other past, present, or reasonably foreseeable future projects, could result in significant cumulative wind and shadow impacts. (Potentially Significant)

In combination with cumulative development, the proposed project could result in significant cumulative wind and shadow impacts. These topics will be discussed in the EIR.

<sup>30</sup> A copy of the shadow fan analysis is available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1542E.

Тор	Topics:		Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
10.	RECREATION—Would the project:					
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?					
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?					
c)	Physically degrade existing recreational resources?				$\boxtimes$	

Impact RE-1: The proposed project would increase the use of existing neighborhood parks or other recreational facilities, but not to an extent that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant)

The closest public open space in the vicinity of the project site that falls under the jurisdiction of the Recreation and Park Department is Justin Herman Plaza, located north and south of Market Street at The Embarcadero, and Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets). In addition, Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along The Embarcadero), are within easy walking distance. There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west. Planned parks in the area include the park atop the proposed Transit Center, as well as the planned Mission Square adjacent to the Transit Tower and diagonally across the Mission/Fremont Streets intersection from the project site, and the planned Transbay Park between Beale Street, Tehama Street, Main Street, and Clementina Street.

The project would be located within walking distance of the above-noted parks and open spaces. Thus, project occupants would have convenient access to public open space. The existing uses on the project site employ 150 people, and the existing school has an enrollment of approximately 800 daytime students and 400 evening/night students. Thus, with a daytime, non-resident population of approximately 1,308 employees, the proposed project would not substantially increase demand for or use of neighborhood parks, such as Justin Herman Plaza, or other facilities such as Yerba Buena Gardens, such that substantial physical deterioration would be expected. The increase in daytime site occupancy that would result from employment at the proposed project would not require the construction of new recreational facilities or the expansion of existing facilities. This topic will not be further discussed in the EIR.

Impact RE-2: The proposed project would include the construction of indoor recreational facilities, the construction of which would have less-than-adverse physical effects on the environment. (Less than Significant)

The proposed project would provide approximately 6,690 square feet of interior open space on-site for passive recreational use by project occupants and visitors, which would exceed the requirements of *Planning Code* Section 138. The ground floor lobby and stairway would contribute approximately 4,755 square feet of open space. The mezzanine would provide an additional 2,205 square feet of publicly accessible seating, which would also be considered open space. The increase in daytime site occupancy that would result from employment at the proposed project would not require the construction of new recreational facilities or the expansion of existing facilities. This topic will not be further discussed in the EIR.

Impact RE-3: The proposed project would not physically degrade existing recreational facilities. (No Impact).

The proposed project would not result in the physical alteration of any existing recreational resource on the project site, within the project vicinity or in city as a whole. As such, the project would not directly physically degrade any existing recreational resources. This topic will be not discussed in the EIR.

Impact RE-4: The proposed project would not considerably contribute to recreational impacts in the project site vicinity. (Less than Significant)

As stated above, the proposed project's employees would not substantially increase demand for recreational facilities in and around the project site. In addition, the project would provide 6,690 square feet of interior open space. Cumulative projects listed in the "Project Setting" would similarly provide onsite open space. Planned parks in the area include the park atop the proposed Transit Center, as well as the planned Mission Square adjacent to the Transit Tower and diagonally across the Mission/Fremont Streets intersection from the project site, and the planned Transbay Park between Beale Street, Tehama Street, Main Street, and Clementina Street. Therefore, the proposed project would have a less-than-significant cumulative impact on recreational resources. This topic will not be further discussed in the EIR.

350 Mission Street

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11.	UTILITIES AND SERVICE SYSTEMS—Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					
d)	Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?			×		
e)	Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			⊠		
g)	Comply with federal, state, and local statutes and regulations related to solid waste?				⊠	

## Impact UT-1: Implementation of the proposed project would result in less-than-significant impact to wastewater collection and treatment facilities. (Less than Significant)

No new wastewater collection and treatment facilities would be required to serve the proposed project, and the project would not result in any residential population increase. The project would meet wastewater pre-treatment requirements of the SFPUC, as required by the San Francisco Industrial Waste Ordinance.<sup>31</sup> While the proposed project would add to sewage flows in the area, it would not cause collection treatment capacity of the sewer system in the City to be exceeded. In light of the above, the proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board and would not require the construction of new wastewater/storm water treatment facilities or expansion of existing ones. Therefore, the proposed project would result in a less-than-significant wastewater impact. Additionally, the project would be subject to the City's Wastewater Capacity Charge.

The project site is served by San Francisco's combined sewage system. The sewage system is designed to collect and treat both sanitary sewage and rainwater runoff in the same sewer and treatment plants. Wastewater treatment for the east side of the City is provided primarily by the Southeast Water Pollution

<sup>31</sup> San Francisco Public Works Code, Article 4.1 (amended by Ordinance No. 19-92, January 13, 1992).

Control Plant. The SFPUC is in the process of developing a long-term San Francisco Sewer Master Plan to address the needs of entire wastewater system citywide. In a parallel effort to address more immediate wastewater needs, the SFPUC in 2005 initiated an interim capital improvement program to, among other things, reduce the potential for on-street flooding during heavy rains that can occur. As of early 2010, some 18 projects have been completed, and several others are under way or due to begin construction in 2010.<sup>32</sup> In addition, in July 2005, the SFPUC began imposing a new Wastewater Capacity Charge pursuant to SFPUC Resolution No. 05-0045. This Wastewater Capacity Charge is applicable to residential, non-residential and mixed-use types of construction that place new or additional demands on the system. All funds raised through the capacity charge will be directly used to offset the cost of future wastewater capital improvement projects and repairs. This topic will not be further discussed in the EIR.

Impact UT-2: Implementation of the proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (No Impact)

The project site is currently covered entirely with impervious surfaces and the proposed project would not create any additional impervious surfaces, resulting in little or no effect on the total storm water volume discharged through the combined sewer system. Therefore, no new storm water drainage facilities would be required to be constructed as a result of the proposed project. This topic will not be further discussed in the EIR.

Impact UT-3: The SFPUC has sufficient water supply and entitlements to serve the proposed project, and implementation of the proposed project would not require expansion or construction of new water treatment facilities. (Less than Significant)

Water is provided by the San Francisco Public Utilities Commission (SFPUC), which provides both water supply and wastewater collection and treatment. The SFPUC is currently in the process of updating its existing 2005 Urban Water Management Plan. The 2005 Plan did not forecast increased water use within San Francisco because of the anticipated success of ongoing conservation efforts.

No new water delivery facilities would be required to serve the proposed project, and the project would not result in any residential population increase. The proposed project would incrementally increase the daytime demand for water in San Francisco. The new building would be designed to incorporate water-conserving measures, such as installing low-flush toilets and urinals, as required by Chapter 4 of the *California Plumbing Code*. Moreover, as a LEED Gold-certified building, the proposed project would incorporate water-saving and waste management features that would reduce water consumption, wastewater generation, and solid waste generation to levels lower than those of comparable non-LEED-

<sup>32</sup> San Francisco Public Utilities Commission, Wastewater Interim Capital Improvement Program webpage, on the SFPUC website at: <a href="http://sfwater.org/mto-main.cfm/MC-ID/14/MSC-ID/116/MTO-ID/381">http://sfwater.org/mto-main.cfm/MC-ID/14/MSC-ID/116/MTO-ID/381</a>. Accessed February 1, 2010.

certified structures. Such measures could include "double plumbing," which involves the installation of separate plumbing systems for wastewater. These systems separate gray water from sanitary wastewater, thereby allowing the reuse of gray water on the site for such purposes as toilet and urinal flushing.

Sufficient growth to accommodate the proposed project's office population was assumed in the SFPUC's 2005 Urban Water Management Plan and an adequate water supply would be available for the proposed project. Since the proposed project would have sufficient water supply available from existing entitlements, it would not require new water supply or water treatment facilities, and the impact would be less than significant. This topic will not be further analyzed in the EIR.

# Impact UT-4: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)

Solid waste from the project site would be collected by Golden Gate Disposal Company and hauled to the Norcal transfer station near Candlestick Point, and recycled as feasible, with non-recyclables being disposed of at the Altamont Landfill in Alameda County. The Altamont Landfill has a permitted maximum disposal of 6,000 tons per day and received about 1.29 million tons of waste in 2007 (the most recent year reported by the State). The total permitted capacity of the landfill is more than 124 million cubic yards; with this capacity, the landfill can operate until 2025.<sup>33</sup> However, the amount of solid waste that San Francisco can deposit at Altamont Landfill is governed by the City's agreement with the landfill operator, and the City is anticipated to reach its current limit between 2013 and 2015. The City is currently reviewing alternatives for longer-term disposal capacity, which may or may not involve continuing disposal at Altamont Landfill. The Department of the Environment anticipates having a new agreement in place during 2010.<sup>34</sup> Although the proposed project would incrementally increase total waste generation from the City, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill. Given this, and given the long-term capacity available at the Altamont Landfill, the solid waste generated by project construction and operation would not result in the landfill exceeding its permitted capacity, and the project would result in a less-than-significant solid waste generation impact. The proposed project would be subject to the City's Mandatory Recycling and Composting Ordinance, which requires all San Francisco residents and commercial landlords to separate their refuse into recyclables, compostables, and trash, thereby minimizing solid waste disposal and maximizing recycling. The project would also be subject to the City's Construction and Demolition Debris Recovery Ordinance, which requires all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material from landfills. This topic will not be further discussed in the EIR.

California Integrated Waste Management Board, Active Landfill Profiles, Altamont Landfill, <a href="http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile2.asp?COID=3&FACID=01-AA-0009">http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFProfile2.asp?COID=3&FACID=01-AA-0009</a>, accessed May 27, 2010.

<sup>34</sup> San Francisco Department of the Environment, "Timeline and Analysis: Disposal Alternatives for San Francisco," January 25, 2008. Available on the internet at: <a href="http://www.sfenvironment.org/downloads/library/1">http://www.sfenvironment.org/downloads/library/1</a> salalternativesjanuary2008.pdf. Accessed March 12, 2009.

## Impact UT-5: The construction and operation of the proposed project would follow all applicable statutes and regulations related to solid waste. (No Impact)

The California Integrated Waste Management Act of 1989 (AB 939) required municipalities to adopt an Integrated Waste Management Plan (IWMP) to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. Reports filed by the San Francisco Department of the Environment showed the City generated 1.88 million tons of waste material in 2002. Approximately 63 percent (1.18 million tons) was diverted through recycling, composting, reuse, and other efforts while 700,000 tons went to a landfill.<sup>35</sup> Additionally, the City had a goal to divert most (75 percent) of its solid waste (through recycling, composing, etc.) by 2010 and to divert all waste by 2020.<sup>36</sup>

San Francisco Ordinance No. 27-06 requires a minimum of 65 percent of all construction and demolition debris to be recycled and diverted from landfills. Furthermore, the project would be required to comply with City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Altamont Landfill is required to meet federal, state and local solid waste regulations.

Implementation of the proposed project would not impede the City from meeting these requirements, and the impact would be less than significant. This topic will not be further analyzed in the EIR.

Impact UT-6: In combination with past, present, and reasonably foreseeable future development in the project site vicinity, the proposed project would have a less-than-significant cumulative impact on utilities and service systems. (Less than Significant)

The proposed cumulative development in the project site vicinity, as described in the "Project Setting," was included in the 2005 Urban Water Management Plan. In addition, cumulative development would be required to pay the applicable Wastewater Capacity Charge to fund the cost of expansion of the wastewater conveyance and treatment system, if necessary. Cumulative development would also predominately replace existing buildings and impervious surfaces. Therefore, cumulative impacts to storm water would be less than significant. This topic will not be further discussed in the EIR.

<sup>35</sup> San Francisco Office of the Controller, Community Indicators Report. Available on the internet at: <a href="http://www.sfgov.org/wcm\_controller/community\_indicators/physicalenvironment/index.htm">http://www.sfgov.org/wcm\_controller/community\_indicators/physicalenvironment/index.htm</a>. Accessed March 12, 2009.

<sup>36</sup> San Francisco Department of the Environment, Zero Waste webpage. Available on the internet at: http://www.sfenvironment.org/our\_programs/program\_info.html?ssi=3&ti=#Reports. Accessed March 12, 2009.

<u>Тор</u> 12.	ics:  PUBLIC SERVICES— Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
a)	Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?					

Impact PS-1: The proposed project would increase demand for police service, but not to an extent that would result substantial adverse impacts associated with the provision of such service. (Less than Significant).

Police service is provided to the site primarily by the San Francisco Police Department's Southern Station, at 850 Bryant Street, 10 blocks from the project site. The project would increase development on the site. Thus, the project would increase the demand for, and use of, police services, but not in excess of amounts expected and provided for in this area. This topic will not be discussed in the EIR.

Impact PS-2: The proposed project would increase demand for fire protection, but not to an extent that would result substantial adverse impacts associated with the provision of such service. (Less than Significant).

Fire protection is provided primarily by the three closest fire stations: Station 1, at 676 Howard Street at Third Street (approximately one block);<sup>37</sup> Station 35, at Pier 22½ on the Embarcadero at Harrison Street (approximately three blocks); and Station 8, at 36 Bluxome Street, at Fourth Street (seven blocks). Combined, these stations are equipped with three engine companies, two truck companies, two medic units (ambulance), and one fireboat.

The project would increase development on the site. Thus, the project would increase the demand for fire protection, but not in excess of amounts expected and provided for in this area. This topic will not be discussed in the EIR.

The San Francisco Fire Department has submitted an Environmental Evaluation application to the Planning Department for relocation of the fire station to a new site at 935 Folsom Street and 5th Street on property to be purchased by the San Francisco Museum of Modern Art and donated to the City and County of San Francisco. City and County of San Francisco Office of the Mayor. Press Release: Mayor Newsom Announces Agreement with SFMOMA for Fire Station. February 22, 2010.

Impact PS-3: The proposed project would indirectly generate school students, but these new students would be accommodated within existing school facilities, and the impact to schools would be less than significant. (Less than Significant)

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), restricts the ability of local agencies such as the City of San Francisco to deny land use approvals on the basis that public school facilities are inadequate. SB 50 establishes the base amount of allowable developer fees at \$2.63 per square foot of residential construction and \$0.42 per square foot of commercial construction as of 2006. These fees are intended to address local school facility needs resulting from new development. Public school districts can, however, impose higher fees provided they meet the conditions outlined in the act.

The nearest public schools are the middle school campus of Bessie Carmichael School/Filipino Education Center (FEC) at Fourth and Harrison Streets, seven blocks southwest of the site; Bessie Carmichael/FEC Elementary at Sherman and Harrison Streets, about 1 mile away; Enola Maxwell Middle School at De Haro and 18th Streets, approximately 2.5 miles from the site; and Mission High School at 18th and Dolores Streets; approximately 3.5 miles away.

Based on the citywide student generation rate employed by the San Francisco Unified School District (SFUSD) of 0.125 students per dwelling unit and the assumptions in Section E.3, Population and Housing, the project would potentially generate, indirectly, up to about 55 students. Given that SFUSD has adequate facilities to accommodate growth, this number of additional new students would not require new school facilities, and it is anticipated that all new students could be accommodated by existing schools under the jurisdiction of the SFUSD. Therefore, the proposed project would not result in a significant environmental effect on schools. Like all new development, the project would be required to pay one-time school impact fees under Government Code Section 65995(b)(3). This topic will not be discussed in the EIR.

Impact PS-4: The proposed project would result in an incremental increase in the use of parks and open spaces in the project vicinity, but the increased use would result in a less than significant impact. (Less than Significant)

The nearest open spaces to the project site include Justin Herman Plaza (on The Embarcadero to the north and south of Market Streets), Sue Bierman Park and Maritime Plaza (extending west from Justin Herman Plaza between Clay and Washington Streets), Yerba Buena Gardens (a Redevelopment Agency property at Third and Mission Streets), and Rincon Park (a Redevelopment Agency property along The Embarcadero). There are numerous privately owned, publicly accessible plazas, gardens and open spaces nearby, including on the project block and the block immediately to the west. Planned parks in the area include the park atop the proposed Transit Center, as well as the planned Mission Square adjacent to the Transit Tower and diagonally across the Mission/Fremont Streets intersection from the project site, and the planned Transbay Park between Beale Street, Tehama Street, Main Street, and Clementina Street.

The incremental daytime non-residential population growth that would result from the proposed office uses and the new retail and restaurant space that would be included in the project would not necessitate the need for new or physically altered parks. See Topic 10, Recreation and Open Space, above, for further discussion of the proposed project's impacts on recreational facilities. This topic will not be discussed in the EIR.

Impact PS-5: The proposed project would increase demand for government services, but not to the extent that would result in significant physical impacts. (Less than Significant).

The incremental daytime non-residential population growth that would result from the proposed office uses and the new retail and restaurant space that would be included in the project would not necessitate the need for new or physically altered other governmental facilities. This topic will not be discussed in the EIR.

Impact PS-6: The proposed project, combined with past, present, and reasonably foreseeable future projects in the vicinity, would result in less-than-significant cumulative impacts to public services. (Less than Significant)

In light of the above, public services would not be adversely affected by the project. Cumulative developments in the project vicinity, as described in the "Project Setting" would be required to pay fees in accordance with Senate Bill 50. In addition, demand for police and fire services would increase, but not in excess of amounts expected and provided for in this area. Therefore, less-than-significant cumulative impacts would ensue. This topic will not be analyzed further in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
13.	BIOLOGICAL RESOURCES— Would the project:					
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					

Тор	oics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				⊠	
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				⋈	
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?					☒

The project area does not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Game and the United States Fish and Wildlife Service; therefore, criterion 12b is not applicable to the proposed project. The project area does not contain any wetlands as defined by Section 404 of the Clean Water Act. Therefore, criterion 12c is not applicable to the proposed project. The proposed project does not fall within any local, regional or state habitat conservation plans. Therefore, criterion 12f is not applicable to the proposed project.

Impact BI-1: The proposed project would have no impact on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (No Impact)

The project site and the majority of the Downtown area around the project site is developed and covered with structures and other impermeable surfaces. Because the project site is in a developed urban area and is almost completely covered by impermeable surface, the proposed project would not affect any rare plants or possible animal habitats, including riparian habitat. Several small landscaping trees exist in pots around the project site. This topic will not be further discussed in the EIR.

Impact BI-2: Implementation of the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (No Impact)

The project site is not located within an established native resident or migratory wildlife corridor and it is not located on or in the vicinity of a native wildlife nursery site. The project site and its surroundings are

		ntown San Francisco, an area which is neable surfaces. This topic will not be	•			tures and	other
_		BI-3: Implementation of the proposetions. (No Impact)	ed project v	vould not co	nflict with l	ocal tree <sub>J</sub>	protection
con spe Pub	side cies <i>lic</i> V	gh development of the proposed towered to be rare or endangered species, and do not qualify as "significant treeworks Code. No rare, threatened, or endpic will not be further discussed in the	they do not es" pursuar dangered sp	t provide hab at to Article 1	itat for rare 6 Section 81	or endang 0(A) of th	gered wildlife e <i>San Francisco</i>
_		BI-4: The proposed project, combines in the vicinity, would make no con	-	-		_	
The reso	cs:	on the above, the project would not resore, the project would not cumulativel res by projects discussed in the "Project"  —— OLOGY AND SOILS— uld the project:	y contribut	e to any pote	ntial cumula	tive effect	s on biological
a)	sub	ose people or structures to potential stantial adverse effects, including the risk of s, injury, or death involving:					
	i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)			⊠		
	ii)	Strong seismic ground shaking?			$\boxtimes$		
	iii)	Seismic-related ground failure, including liquefaction?			$\boxtimes$		
	iv) l	_andslides?				$\boxtimes$	
b)		sult in substantial soil erosion or the loss of				$\boxtimes$	

Topics:		Potentially Significant Impact	Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
c)	Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onor off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?					
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?				⊠	
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?					⊠
f)	Change substantially the topography or any unique geologic or physical features of the site?				$\boxtimes$	

Loce Than

The proposed project would connect to the City's sewer and stormwater collection and treatment system and would not use a septic waste disposal system. Therefore, criterion 13e is not applicable to the project site.

Impact GE-1: The proposed project would result in exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading, but the impact would be less-than-significant. (Less than Significant)

The project site is not located in an Alquist-Priolo Special Studies Zone. No known active fault exists on or in the immediate vicinity of the site.<sup>38</sup> In a seismically active area, such as the San Francisco Bay area, the possibility exists for future faulting in areas where no faults previously existed. The geotechnical investigations performed for the project site concludes that the likelihood of ground rupture is very low. <sup>39</sup> The closest active faults are the San Andreas Fault, approximately located about 9 miles southwest of the project site, and the Hayward Fault, about 10 miles northeast of the project site.

The *San Francisco General Plan* Community Safety Element contains maps that show areas of the city subject to geologic hazards. The project site is located in an area subject to "very violent" groundshaking (Modified Mercalli Intensity X) from earthquakes along the Peninsula segment of the San Andreas Fault and the North and South segments of the Hayward Fault (Map 2 of the Community Safety Element).<sup>40</sup>

<sup>&</sup>lt;sup>38</sup> California Geological Survey (CGS; formerly California Division of Mines and Geology) *Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1998*, [http://www.consrv.ca.gov], November 16, 1998, and CGS, *Fault Rupture Hazard Zones in California* Alquist Priolo Earthquake Zoning Act, Special Publication 42, Revised 1997.

<sup>&</sup>lt;sup>39</sup> Treadwell & Rollo, *Geotechnical Investigation*, 350 Mission Street, San Francisco, California, August 21, 2008. A copy of this report is available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1524E.

<sup>40</sup> Continued research has resulted in revisions to ABAG's earthquake hazard maps. Available on ABAG website (viewed January 31, 2010) at: <a href="http://www.abag.ca.gov/bayarea/eqmaps/mapsba.html">http://www.abag.ca.gov/bayarea/eqmaps/mapsba.html</a>. Based on the current (2003) ABAG mapping, the shaking hazard potential at the project site is considered to be "very violent." The original 1995 ABAG maps, published in On Shaky Ground and included in the General Plan Community Safety Element, identified the potential for "extreme damage" in the

Like the entire San Francisco Bay Area, the project site is subject to ground shaking in the event of an earthquake on regional fault lines.

The existing building occupies the entire project site. It has a single basement level, with the top of the floor slab about 9 feet below sidewalk grade. The soil beneath the basement slap generally consists of up to 13 to 17 feet of undocumented fill (i.e., fill placed during the original reclamation of the site from San Francisco Bay, in the 19th century, when placement of fill was substantially unregulated). Beneath the fill is a layer of so-called Bay Mud, to a depth of about 50 feet below grade, which is below the maximum level of proposed excavation. Below the Bay Mud is a layer of Colma Sand about 30 to 40 feet deep. Colma Sand is a very dense, strong material that is capable of accommodating large loads, according to the geotechnical report. Groundwater is very shallow, at a depth as shallow as about 5 feet below grade.

The geotechnical investigation found that the sandy fill and Bay Mud underlying the site are susceptible to liquefaction, and could result in ground settlement of as much as 3 inches following a major earthquake. However, because the proposed project would excavate most of the liquefiable soils beneath the project site, the report concluded that "liquefaction induced settlement will be negligible below foundation level."<sup>42</sup>

The geotechnical investigation recommended that proposed project be constructed on a reinforced concrete mat foundation founded upon the Colma Sand formation. The report concluded that the proposed project is feasible as proposed from a geotechnical engineering standpoint, assuming the recommendations in the report are followed. The report provides recommendations regarding site preparation and grading; removal of timber piles that support the existing four-story building; waterproofing of the concrete mat and basement walls; seismic design, including design of utility trenches; shoring of sidewalks and adjacent high-rise buildings, including monitoring for movement of adjacent buildings; and dewatering (see Section E.15, Hydrology). The project sponsor would follow the recommendations in the geotechnical investigation.

The final building plans would be reviewed by the Department of Building Inspection (DBI). Potential geologic hazards would be ameliorated during the DBI permit review process. In reviewing building plans, the DBI refers to a variety of information sources to determine existing hazards and assess requirements for mitigation. Sources reviewed include maps of Special Geologic Study Areas and known landslide areas in San Francisco as well as the building inspectors' working knowledge of areas of special geologic concern. For any development proposal in an area of liquefaction potential, the DBI will, in its review of the building permit application, require the project sponsor to prepare a geotechnical report that assesses the nature and severity of the hazard(s) on the site and recommends project design and

project area. ABAG notes on its website, "The damage, however, will not be uniform. Some buildings will experience substantially more damage than this overall level, and others will experience substantially less damage." Buildings that are expected to experience greater damage are older buildings that have not received seismic strengthening improvements.

<sup>41</sup> Treadwell & Rollo Geotechnical Investigation (see footnote 39, p. 63); pp. 9, 22

<sup>42</sup> Treadwell & Rollo, op. cit.; p. 15.

construction features that would reduce the hazard(s). To ensure compliance with all *San Francisco Building Code* (*Building Code*) provisions regarding structural safety, when DBI reviews the geotechnical report and building plans for a proposed project, it will determine necessary engineering and design features for the project to reduce potential damage to structures from groundshaking and liquefaction. Therefore, the potential damage to structures from geologic hazards on a project site would be ameliorated through the DBI requirement for a geotechnical report and review of the building permit application. Any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process would constitute minor modifications of the project and would not require additional environmental analysis.

The impacts would therefore be less than significant. This topic will not be further discussed in the EIR.

Impact GE-2: The proposed project site would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (No Impact).

As shown on the official State of California Seismic Hazards Zone Map for San Francisco prepared under the Seismic Hazards Mapping Act of 1990,<sup>43</sup> the project site does not lie within an area subject to landslide (Map 5 of the Community Safety Element). Therefore, there would be no impact, and this topic will not be further discussed in the EIR.

Impact GE-3: The proposed project would not result in substantial loss of topsoil or erosion. (No Impact)

The project site is at an elevation of approximately 3 feet, San Francisco City Datum<sup>44</sup> and is generally flat and level. The project site is completely occupied by the existing four-story office building (currently educational and retail uses), and therefore is completely covered by impervious surfaces and would remain so with implementation of the proposed project. Thus, the project would not result in a loss of top soil, nor result in substantial soil erosion on the project site or surrounding properties. There would be no impact, and this topic will not be further discussed in the EIR.

Impact GE-4: The proposed project would not result in impacts to site topographical features. (No Impact)

<sup>43</sup> The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones.

San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum.

The project site is located on a block that is generally flat. The project site itself is flat and has no unique topography. The proposed project would have no impact with respect to topographical features of the site, and this topic will not be further discussed in the EIR.

Impact GE-5: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to geology and soils. (Less than Significant)

The proposed project would result in No Impact to topographical features, loss of topsoil or erosion, or risk of injury or death involving landslides. Therefore, the project would not have a considerable contribution to related cumulative impacts, if any, of the projects listed in the "Project Setting." In addition, cumulative projects building plans would be reviewed by the Department of Building Inspection (DBI), and potential geologic hazards would be ameliorated during the DBI permit review process. Therefore, the cumulative impacts to geology, soils, and seismicity would be less than significant, and this topic will not be further discussed in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
15.	HYDROLOGY AND WATER QUALITY— Would the project:					
a)	Violate any water quality standards or waste discharge requirements?			$\boxtimes$		
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?					
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?					
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?					
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?					
f)	Otherwise substantially degrade water quality?			$\boxtimes$		

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?			⊠		
h)	Place within a 100-year flood hazard area . structures that would impede or redirect flood flows?					
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?					
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?					

Impact HY-1: The proposed project would not violate water quality standards or otherwise substantially degrade water quality. (Less than Significant).

Construction: Over the construction period, there would be a potential for erosion and transportation of soil particles during site preparation, excavation, foundation pouring, and construction of the building shell. Once in surface water runoff, sediment and other pollutants could leave the construction site and ultimately be released into the San Francisco Bay. Stormwater runoff from project construction would drain into the combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into San Francisco Bay. Pursuant to the San Francisco Building Code and the City's National Pollutant Discharge Elimination System (NPDES) permit, the project sponsor would be required to implement measures to reduce potential erosion impacts.

These measures include adherence to the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI). The Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. The Director of DBI may waive this requirement for activities on sites less than one half-acre that are unlikely to result in any visible wind-blown dust.

The project sponsor and the contractor responsible for construction activities at the project site shall use the following practices to control construction dust on the site or other practices that result in equivalent dust control that are acceptable to the Director of DBI. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the *San Francisco Public Works Code*. If not required,

reclaimed water should be used whenever possible. Contractors shall provide as much water as necessary to control dust (without creating run-off in any area of land clearing, and/or earth movement. During excavation and dirt-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10 millimeter (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques.

In addition, as noted above in Section E.14, Geology and Soils, the groundwater level at the site is shallow, at about 5 feet below grade. Because the project would involve excavation to a depth of approximately 50 feet, dewatering would be necessary during construction. Any groundwater encountered during construction of the proposed project would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system. The Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission must be notified of projects necessitating dewatering, and may require water analysis before discharge. The final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the report would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in the Building Code) be retained by the project sponsor to perform this monitoring.

Groundwater observation wells would be installed to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during dewatering, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor.

Operation: During project operation, all wastewater from the proposed project building, and storm water runoff from the project site, would be treated at the Southeast Water Pollution Control Plant. Treatment would be provided pursuant to the effluent discharge standards contained in the City's NPDES permit for the plant. During operation, the proposed project would be required to comply with all local wastewater discharge and water quality requirements.

Therefore, the proposed project would not substantially degrade water quality during both construction and operation. This topic will not be further discussed in the EIR.

Impact HY-2: The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (No Impact)

Groundwater is not used as a drinking water supply in the City and County of San Francisco. The project site is completely covered with impervious surfaces and natural groundwater flow would continue under and around the site. Construction of the proposed project would not increase impervious surface coverage on the site nor reduce infiltration and groundwater recharge. Therefore, the proposed project would not substantially alter existing groundwater or surface flow conditions, and this topic will not be further discussed in the EIR.

### Impact HY-3: The proposed project would not result in altered drainage patterns that would cause substantial erosion or flooding. (No Impact)

Because the proposed project would not change the amount of impervious surface area at the site, there would be no increase in the quantity and rate of stormwater runoff from the site that flows to the city's combined sewer system. The proposed project would alter drainage onsite, but site runoff would continue to drain to the city's combined storm and sanitary sewer system. Therefore, the project would not substantially alter drainage patterns. The foundation and portions of the building below grade would be water tight to avoid the need to permanently pump and discharge water. Because stormwater flows from the proposed project would not change, the proposed project would not significantly affect surface or ground water quality.

Development in the City and County of San Francisco must account for flooding potential. Areas located on fill or bay mud can subside to a point at which the sewers do not drain freely during a storm (and sometimes during dry weather) and there can be backups or flooding near these streets and sewers. As described in Section E.14, Geology and Soils, however, the proposed project would be constructed on a deep foundation designed to minimize settlement. Therefore, and because the project site does not fall within an area in the City prone to flooding during storms as mapped by the Department of Public Works, no flooding hazard would ensue due to interference with site drainage.

Impact HY-4: The proposed project would not contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

As stated above under Impact HY-3, because the proposed project would not change the amount of impervious surface area at the site, there would be no increase in the quantity and rate of stormwater runoff from the site that flows to the city's combined sewer system. As stated above under Impact HY-1, stormwater runoff from project construction would drain into the combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into San Francisco Bay. Pursuant to the San Francisco Building Code and the City's National Pollutant Discharge Elimination System (NPDES) permit, the project sponsor would be required to implement measures to reduce potential erosion impacts. Therefore, the proposed project would not substantially contribute additional polluted runoff.

Impact HY-5: The proposed project would not expose people, housing, or structures, to substantial risk of loss due to flooding. (Less than Significant)

Flood risk assessment and some flood protection projects are conducted by federal agencies including the Federal Emergency Management Agency (FEMA) and the U.S. Army Corps of Engineers (Corps). The flood management agencies and cities implement the National Flood Insurance Program (NFIP) under the jurisdiction of FEMA and its Flood Insurance Administration. Currently, the City of San Francisco does not participate in the NFIP and no flood maps are published for the City. However, FEMA is preparing Flood Insurance Rate Maps (FIRMs) for the City and County of San Francisco for the first time. FIRMs identify areas that are subject to inundation during a flood having a one percent chance of occurrence in a given year (also known as a "base flood" or "100-year flood"). FEMA refers to the flood plain that is at risk from a flood of this magnitude as a special flood hazard area ("SFHA").

Because FEMA has not previously published a FIRM for the City and County of San Francisco, there are no identified SFHAs within San Francisco's geographic boundaries. FEMA has completed the initial phases of a study of the San Francisco Bay. On September 21, 2007, FEMA issued a preliminary FIRM of San Francisco for review and comment by the City. The City has submitted comments on the preliminary FIRM to FEMA. FEMA anticipates publishing a revised preliminary FIRM in 2010, after completing the more detailed analysis that Port and City staff requested in 2007. After reviewing comments and appeals related to the revised preliminary FIRM, FEMA will finalize the FIRM and publish it for flood insurance and floodplain management purposes.

FEMA has tentatively identified SFHAs along the City's shoreline in and along the San Francisco Bay consisting of Zone A (in areas subject to inundation by tidal surge) and Zone V (areas of coastal flooding subject to wave hazards). <sup>45</sup> On June 10, 2008, legislation was introduced at the San Francisco Board of Supervisors to enact a floodplain management ordinance to govern new construction and substantial improvements in flood prone areas of San Francisco, and to authorize the City's participation in NFIP upon passage of the ordinance. Specifically, the proposed floodplain management ordinance includes a requirement that any new construction or substantial improvement of structures in a designated flood zone must meet the flood damage minimization requirements in the ordinance. The NFIP regulations allow a local jurisdiction to issue variances to its floodplain management ordinance under certain narrow circumstances, without jeopardizing the local jurisdiction's eligibility in the NFIP. However, the particular projects that are granted variances by the local jurisdiction may be deemed ineligible for federally-backed flood insurance by FEMA.

Once the Board of Supervisors adopts the Floodplain Management Ordinance, the Department of Public Works will publish flood maps for the City, and applicable City departments and agencies may begin implementation for new construction and substantial improvements in areas shown on the Interim

<sup>45</sup> City and County of San Francisco, Office of the City Administrator, National Flood Insurance Program Flood Sheet, http://sfgsa.org/index.aspx?page=828. Accessed January 31, 2010.

Floodplain Map. According to the preliminary map, the proposed project is neither within Zone A nor Zone V.<sup>46</sup> The project site is not within a flood plain designated on the City's interim flood plain maps. Therefore, the project would result in less-than-significant impacts related to development within a 100-year flood zone.

Maps published by the Bay Conservation and Development Commission (BCDC) indicate that, with a potential sea level rise of 55 inches (4.6 feet)— the anticipated rise in sea level by year 2100 due to global warming—areas of San Francisco along the Bay shoreline could be inundated.<sup>47</sup> However, the areas of potential inundation indicated on the BCDC maps do not include the project site. Nevertheless, continued emissions of greenhouse gases and the associated increase in global warming can be expected to have serious consequences for San Francisco, the Bay Area, California, and beyond. These effects will be discussed in the EIR analysis of Greenhouse Gases.

Impact HY-6: The proposed project would note expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (Less than Significant)

As discussed in the section pertaining to geology and soils, above, the project site is not in an area subject to tsunami run-up, or reservoir inundation hazards (Maps 6, and 7 in the *General Plan* Community Safety Element). Therefore, the project is not expected to expose people or structures to risk from inundation by seiche, tsunami or mudflow. This topic will not be further discussed in the EIR.

Impact HY-7: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to hydrology and water quality. (Less than Significant).

As stated above, the proposed project would result in no impact to groundwater levels or existing drainage patterns. Therefore, it would not considerably contribute to cumulative impacts, if any, from cumulative development projects described in the "Project Setting." Cumulative development projects also fall outside flood plain designated on the City's interim flood plain maps. Therefore, cumulative impacts related to flooding would be less than significant. Finally, cumulative development projects would be required to follow dust control and dewatering water quality regulations, similar to the proposed project. Therefore, cumulative hydrology and water quality impacts would be less than significant. This topic will not be further discussed in the EIR.

<sup>46</sup> Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at <a href="http://sfgsa.org/index.aspx?page=828">http://sfgsa.org/index.aspx?page=828</a>, accessed January 31, 2010.

<sup>&</sup>lt;sup>47</sup> Bay Conservation and Development Commission, "Shoreline Areas Vulnerable to Sea Level Rise: Central Bay." Available on the internet at: <a href="http://www.bcdc.ca.gov/planning/climate\_change/climate\_change.shtml">http://www.bcdc.ca.gov/planning/climate\_change/climate\_change.shtml</a>. Accessed January 31, 2010.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16.	HAZARDS AND HAZARDOUS MATERIALS Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			⊠		
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?					
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			⊠		
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?					
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?					
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			⊠		
h)	Expose people or structures to a significant risk of loss, injury or death involving fires?					

The project site is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore, topics 15e and 15f are not applicable to the proposed project.

Impact HZ-1: The proposed project would not create a significant hazard through routine transport, use, disposal, handling or emission of hazardous materials. (Less than Significant)

The proposed project would involve the development of a 24-story office building with three levels of basement parking, and retail and restaurant uses on the ground floor and mezzanine. Project occupants would likely handle common types of hazardous materials, such as cleaners, disinfectants, and chemical agents required to maintain the sanitation of the residential areas, and commercial bathrooms and food preparation areas. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Businesses are required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers who

handle hazardous materials, and adequately training workers. For these reasons, hazardous materials used in the proposed project would not pose any substantial public health or safety hazards related to hazardous materials with respect to the surrounding areas or nearby schools. The impact would be less than significant, and this topic will not be further discussed in the EIR.

Impact HZ-2: Demolition and excavation of the project site could result in handling and accidental release of contaminated soils and hazardous building materials associated with historic uses. (Potentially Significant)

<u>Contaminated Soil and Groundwater.</u> A Phase I Environmental Site Assessment (ESA) report was prepared for the project site in 1997, and an update to that report prepared in 2005. <sup>48</sup> The potential for soil and groundwater contamination and hazardous building materials at the project site were assessed as part of this report, which is summarized below.

The City has adopted an ordinance (Ordinance 253-86, incorporated as Article 22A of the *San Francisco Health Code* and Section 106A.3.2.4 of the *San Francisco Building Code*) that requires analyzing soil for hazardous wastes within specified areas, known as the Maher area, when over 50 cubic yards of soil is to be disturbed and on sites specifically designated by the Director of Public Works. <sup>49</sup> The project site falls within the boundary of the "Maher Ordinance" and, therefore, would be subject to Article 22A.

The Phase I ESA and update conducted a comprehensive records review of the project site as well as the records for environmental releases from nearby properties. Prior to the 1906 earthquake, the project site and vicinity were in heavy industrial use, and the site was occupied by machine and milling shops, a blacksmith, and other facilities associated with a machine works. The surrounding neighborhood included a number of other similar industrial uses. However, after the earthquake and fire, the character of the South of Market neighborhood changed. The existing building, built in 1923, has historically been used for offices and warehousing; currently, it is occupied by Heald College, which has classrooms, computer labs, offices, and meeting space in the second through fourth floors; the basement is used for storage. The building underwent a major renovation and seismic upgrade in 1997, at which time asbestos and lead-based paint were largely removed from the building. As part of the seismic upgrade, excavation was undertaken and soil removed. The soil was tested and found to have a lead content in excess of typical background concentrations, and required disposal as hazardous waste at a Class I landfill. Elevated lead levels are common in artificial fill in downtown San Francisco, oftentimes associated with debris from the 1906 earthquake and fire. Given the site's location in the zone that burned in 1906, and

<sup>48</sup> Lowney Associates, Phase I Preliminary Environmental Site Assessment, 350 Mission Street, San Francisco, California, July 1997; Lowney Associates, "Phase I Update, 350 Mission Street, San Francisco, California," letter report, December 2, 2005. Available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1542E.

<sup>&</sup>lt;sup>49</sup> The Maher Ordinance applies to that portion of the City bayward of the original high tide line, where past industrial uses and fill associated with the 1906 earthquake and bay reclamation often left hazardous waste residue in soils and groundwater. The ordinance requires that soils must be analyzed for hazardous wastes if more than 50 cubic yards of soil are to be disturbed.

given the results of the previous excavation and soil disposal, it is assumed that some of the excavation spoils removed as part of the current project would require disposal as hazardous waste.

The soil testing conducted as part of the 1997 building upgrade apparently involved soil that was excavated in conjunction with the installation of foundations to support new concrete shear walls; it appears that the excavation extended to no more than 10 feet below the basement (about 20 feet below grade), and possibly less,<sup>50</sup> whereas the proposed project would require excavation to a depth of approximately 50 feet below grade. The previous excavation likely occurred in historic fill that was placed during the reclamation of the site from San Francisco Bay, in the 19th century; as stated in Section E.14, Geology and Soils, fill in the project vicinity extends about 13 to 17 feet below the building basement, or about 22 to 26 feet below street grade. Article 22A requires that soil be analyzed for the presence of hazardous wastes to the depth of the proposed excavation. Moreover, information concerning the location on the site from which the soils sampled in 1997 were excavated is not available. Therefore, additional soil characterization would be required. To this end, the San Francisco Department of Public Health, Environmental Health Section, Hazardous Waste Unit (DPH) requested preparation of a Work Plan to further investigate subsurface conditions. The Work Plan was submitted to DPH for review and DPH approved the Work Plan in May 2010.<sup>51</sup> Mitigation Measure M-HZ-2a (p. 75) would require implementation of the Work Plan for Soil and Groundwater Characterization and, if warranted based on the results of the soil and groundwater testing, preparation and implementation of a Site Mitigation Plan. Implementation of this measure would ensure that impacts related to soil excavation and disposal are mitigated to a less than significant level.

With regard to nearby properties, the 1997 Phase I ESA identified a number of nearby sites where leaking underground storage tanks were reported to have leaked. However, review of the State Water Resources Control Board GeoTracker site indicates that the nearby sites identified in 1997 have been closed, and therefore there is no substantial potential for groundwater contamination at the project site. Moreover, as described in Section E.15, Hydrology, any groundwater encountered during project would be subject to requirements of the City's Industrial Waste Ordinance, and would be tested prior to discharge, if so required by the Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission. These regulations would ensure that potential impacts related to groundwater contamination would be less than significant.

If warranted by the results of the soil and groundwater testing undertaken pursuant to Mitigation Measure M-HZ-2a, Mitigation Measure M-HZ-2b (p. 76), preparation of a Site Mitigation Plan, when implemented, would ensure that contaminated material is removed from the site or otherwise managed in accordance with applicable regulatory requirements and in a manner ensuring worker and public

Treadwell & Rollo, Geotechnical Investigation: 350 Mission Street Building Seismic Strengthening, July 3, 1997; Lowney Associates, Phase I Preliminary Environmental Site Assessment (see footnote 48, p. 73). These reports are available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1524E.

<sup>51</sup> Treadwell & Rollo, Environmental Site Characterization Work Plan, 350 Mission Street, San Francisco California, May 10, 2010; and Rajiv Bhatia, MD, MPH, Director, Occupational and Environmental Health, San Francisco Department of Public Health, letter to David Wall, GLL US Office, LP, May 17, 2010. These documents are available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, in File No. 2006.1524E.

health and safety thereby reducing the potential effect to a less-than-significant level This topic will not be further discussed in the EIR.

#### Mitigation Measure M-HZ-2a—Work Plan for Soil and Groundwater Characterization

The project sponsor shall cause to have implemented a Work Plan for the Characterization of Subsurface Soils and Groundwater for the project site. The Work Plan as approved by the San Francisco Department of Public Health, Environmental Health Section, Hazardous Waste Unit (DPH) includes the following.

Once the existing building has been demolished and debris removed from the site, subsurface investigation of the site will be undertaken. The proposed subsurface investigation will consist of the following:

- Obtain a soil boring permit from DPH;
- Notify Underground Service Alert and a private utility locating service a minimum of 48 hours prior to conducting the field investigation;
- Complete a minimum of three soil borings (two to a depth of 10 feet below the existing basement slab and one to the proposed depth of excavation, approximately 50 feet below grade) in the area proposed to be excavated and to the depth of proposed excavation, at locations to be reviewed and accepted by DPH;
- Collect soil samples in the two shallow borings at depths of approximately 1.5, 3, 5, 7.5, and 10 feet below the basement slab, and in the deeper boring at depths of 1.5, 3, 5, 7.5, 10, 15, 20, 25, 30, 35, 40, 45, and 50 feet below street grade;
- After the deep boring has been advanced to the maximum depth, collect a grab groundwater sample through a slotted, one-inch diameter PVC temporary casing, using a disposable bailer and decanted into appropriately preserved containers;
- Screen all soil samples in the filed for organic vapor and transport all soil and groundwater samples to a laboratory for analysis using chain-of-custody procedures; and
- Prepare a report of the findings.

The soil samples will be analyzed for total recoverable petroleum hydrocarbons (TRPH), total petroleum hydrocarbons (TPH) as gasoline and diesel, volatile organic compounds (VOCS), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), California assessment manual (CAM) 17 metals, leaking underground fuel tank (LUFT) S metals, total lead, asbestos, pH, cyanide, and sulfides. The groundwater sample will be analyzed for the following San Francisco Public Utilities Commission (SFPUC) discharge permit requirements: pH, dissolved sulfides, hydrocarbon oil and grease, total recoverable oil and grease, VOCs, SVOCs, total suspended solids, chemical oxygen demand, CAM 17 metals, phenols, and cyanide.

If the test results indicate elevated total metal concentrations, additional testing for soluble metals, using the California waste extraction test (WET) may be required to assess whether the material is a California hazardous waste. If significant levels of soluble metals are detected, additional analyses using toxicity characteristic leaching procedure (TCLP) may be necessary to determine if the material is a Federal hazardous waste.

#### Mitigation Measure M-HZ-2b—Hazards and Hazardous Materials (Site Mitigation Plan)

If elevated concentrations of heavy metals and/or petroleum hydrocarbons are detected at the Site, prepare a site mitigation plan (SMP) that outlines specific soil handling procedures to be followed during construction. The SMP would also specify basic health and safety concerns to be addressed by the site contractor or subcontractor responsible for worker and public health and safety, through the preparation of a detailed health and safety plan by the project contractor. The SMP would be sent to DPH for approval prior to any excavation activities.

Impact with Mitigation Incorporation: Less than Significant.

<u>Hazardous Building Materials</u>. As noted above, the existing building on the project site underwent asbestos and lead-paid remediation as part of the 1997 renovation. Therefore, it is unlikely that substantial amounts of these materials remain. Nevertheless, compliance with the regulations discussed below would ensure that impacts related to asbestos and lead-based paint would be less than significant.

Asbestos. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished/altered including size, age and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The District randomly inspects asbestos removal operations. In addition, the District will inspect any removal operation when a complaint has been received.

The local office of the State Occupational Safety and Health Administration (Cal-OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, the DBI would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

These regulations and procedures, already established as a part of the permit review process, would insure that any potential impacts due to asbestos would be reduced to a level of insignificance.

Lead-based Paint. Work that could result in disturbance of lead paint must comply with Section 3423 of the San Francisco Building Code, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Where there is any work that may disturb or remove lead paint on the exterior of any building built prior to December 31, 1978, Section 3423 requires specific notification and work standards, and identifies prohibited work methods and penalties. (The reader may be familiar with notices commonly placed on residential and other buildings in San Francisco that are undergoing re-painting. Generally affixed to a drape that covers all or portions of a building, these notices are a required part of the Section 3423 notification procedure.)

Section 3423 applies to the exterior of all buildings or steel structures on which original construction was completed prior to 1979 (which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis), and to the interior of residential buildings, hotels, and childcare centers. The ordinance contains performance standards, including establishment of containment barriers, at least as effective at protecting human health and the environment as those in the HUD Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards) and identifies prohibited practices that may not be used in disturbances or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground from contamination during exterior work; protect floors and other horizontal surfaces from work debris during interior work; and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Clean-up standards require the removal of visible work debris, including the use of a High Efficiency Particulate Air Filter (HEPA) vacuum following interior work.

The ordinance also includes notification requirements and requirements for signs. Prior to the commencement of work, the responsible party must provide written notice to the Director of the DBI, of the address and location of the project; the scope of work, including specific location; methods and tools to be used; the approximate age of the structure; anticipated job start and completion dates for the work; whether the building is residential or nonresidential, owner-occupied or rental property; the dates by which the responsible party has or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. (Further notice requirements include Sign when containment is required, Requirements for sign when containment is required; Notice to occupants, Availability of pamphlet related to protection from lead in the home, and Early Commencement of Work [Requested by Tenant]). The ordinance contains provisions regarding inspection and sampling for compliance by DBI, and enforcement, and describes penalties for non-compliance with the requirements of the ordinance.

These regulations and procedures by the *Building Code* would ensure that potential impacts of demolition due to lead-based paint would be reduced to a level of insignificance.

*Other Hazardous Building Materials*. According to the Phase I ESA, electrical transformers that transformers that contained polychlorinated biphenyls (PCBs) were removed from the project site around 1985, and were not reported to have leaked. Nevertheless, PCBs could still be present, particularly in

drainage sumps located in the basement. Other hazardous building materials, such as fluorescent light ballasts, could also be present, and could pose health threats for construction workers if not properly disposed of. However, implementation of Mitigation Measure M-HZ-2c would require that the presence of such materials be evaluated prior to demolition and, if such materials were present, that they be properly handled during removal and building demolition. This would reduce the potential impacts of these hazardous materials to a less-than-significant level. This topic will not be further discussed in the EIR.

#### Mitigation Measure M-HZ-2c—Hazardous Building Materials

The project sponsor shall ensure that PCB-containing equipment such as fluorescent light ballasts are removed and properly disposed of prior to the start of renovation. Old light ballasts that would be removed during renovation would be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast could not be verified, then they would be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous materials identified either before or during renovation would be abated according to federal, state, and local laws and regulations.

Impact with Mitigation Incorporation: Less than Significant.

### Impact HZ-3: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

Occupants of the proposed building would contribute to congestion if an emergency evacuation of the Downtown neighborhood were required. Section 12.202(e)(1) of the *San Francisco Fire Code* requires that all owners of high-rise buildings (over 75 feet) "Shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division." Additionally, project construction would have to conform to the provisions of the *Building Code* and *Fire Code* which require additional life-safety protections for high-rise buildings. Impacts to emergency response or evacuation plans would be less than significant, and this topic will not be further discussed in the EIR.

### Impact HZ-4: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *Building Code* and the *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans would be reviewed by the San Francisco Fire Department (as well as the DBI) to ensure conformance with these provisions. The proposed project would conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards would be mitigated during the permit review process. This impact would be less than significant, and this topic will not be further discussed in the EIR.

Impact HZ-5: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to hazards and hazardous materials. (Less than Significant)

Cumulative development projects described in the "Project Setting" be required to follow applicable regulations for hazardous materials disposal during demolition and construction, and project operations would use substantially similar amounts and types of hazardous materials as the proposed project. Any accidental spill or release of the materials would not combine with the proposed project to create significant hazards or hazardous materials impacts. This topic will not be further discussed in the EIR.

Торі	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17.	MINERAL AND ENERGY RESOURCES— Would the project:					
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				⊠	
b)	Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?					
c)	Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?			×		

Impact ME-1: The proposed project would not result in the loss of availability of a known mineral resource or a locally-important mineral resource recovery site. (No Impact)

All land in San Francisco, including the project site, is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of 1975 (CDMG, Open File Report 96-03 and Special Report 146 Parts I and II). This designation indicates that there is inadequate information available for assignment to any other MRZ and thus the site is not a designated area of significant mineral deposits. Since the project site is already developed, future evaluation or designation of the site would not affect or be affected by the proposed project. There are no operational mineral resource recovery sites in the project area whose operations or accessibility would be affected by the construction or operation of the proposed project. This topic will not be further discussed in the EIR.

Impact ME-2: Implementation of the proposed project would not encourage activities which would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (Less than Significant)

New buildings in San Francisco are required to conform to energy conservation standards specified by the San Francisco Building Code, including the San Francisco Green Building Ordinance (SFGBO), which would require the project to meet various conservation standards. Specifically, the project would be required to achieve LEED Silver Certification. The project is intended to exceed this requirement by attaining LEED Gold. Documentation showing compliance with the SFGBO standards is submitted with the application for the building permit. The SFGBO and Title 24 are enforced by the Department of Building Inspection. Moreover, as a LEED Gold-certified building, the proposed project would incorporate energy-saving features that would reduce energy consumption to levels lower than those of comparable non-LEED-certified structures. Because the proposed project would meet current state and local codes concerning energy consumption and would not cause a wasteful use of energy, and because of the project's stated goal of LEED Gold certification, effects related to energy consumption would not be considered significant. Therefore, the proposed project would not cause a wasteful use of energy and the effects related to energy consumption would not be considered significant. In light of the above, effects related to energy consumption would not be considered significant, nor would the project contribute considerably to any cumulative effects related to energy use.

Given the above, effects related to energy resources would not be significant, and this topic will not be further discussed in the EIR.

Impact ME-3: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to energy and minerals. (Less than Significant)

The cumulative development projects described in the "Project Setting" are not located on sites designated as areas of significant mineral deposits. In addition, these developments would be required to implement energy efficiency measures as required by the *San Francisco Building Code*. Cumulative impacts to energy and mineral resources would be less than significant, and this topic will not be further discussed in the EIR.

Тор	ics:	Potentially Significant Impact	Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
18.	AGRICULTURE AND FOREST RESOURCES In determining whether impacts to agricultural resorthe California Agricultural Land Evaluation and Site Conservation as an optional model to use in assess Would the project:	Assessment	Model (1997) pre	epared by the (		
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?					
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?					⊠
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?					
d)	Result in the loss of forest land or conversion of forest land to non-forest use?					⊠
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest					

Impact AF-1: The proposed project would not result in the conversion of farmland or forest land to non-farm or non-forest use, nor would it conflict with existing agricultural or forest use or zoning. (No Impact)

The project site is located within an urban area in the City and County of San Francisco. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the site as *Urban and Built-Up Land*, which is defined as "...land [that] is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes." The project site does not contain agricultural or forest uses and is not zoned for such uses, nor does the site include any forest resources. The proposed project would not involve any changes to the environment that could result in the conversion of farmland or loss of forest resources. Accordingly, these criteria are not applicable to the proposed project, and will not be included in the EIR.

Тор	ics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact	Not Applicable
19.	MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:					
a)	Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?					
b)	Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					
c)	Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?					

The EIR will evaluate potential impacts, including cumulative impacts, related to traffic and transportation, air quality, and shadow and wind.

#### F. MITIGATION MEASURES

Mitigation measures identified in the analyses in Section E are recapitulated here.

#### Mitigation Measure M-CP-2—Archaeological Resources

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Transit Center District Plan archeological research design and treatment plan (Far Western Anthropological Research Group, Inc., Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California, February 2010) at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a

less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) and (c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program (AMP) shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation

with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;

- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations.
- Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
- Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
- Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.

- Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- Final Report. Description of proposed report format and distribution of results.
- *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

#### Mitigation Measure M-NO-2a: Noise Control Measures for Pile Driving

- Should pile-driving be necessary for the proposed project, the project sponsor would
  require that the project contractor pre-drill holes (if feasible based on soils) for piles to the
  maximum feasible depth to minimize noise and vibration from pile driving.
- Should pile-driving be necessary for the proposed project, the project sponsor would require that the construction contractor limit pile driving activity to result in the least disturbance to neighboring uses. Any nighttime work would require a work permit from the Director of Public Works or the Director of Building Inspection pursuant to San Francisco Noise Ordinance Section 2908.

#### Mitigation Measure M-NO-2b: General Construction Noise Control Measures

To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project sponsor would undertake the following:

- The project sponsor would require the general contractor to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- The project sponsor would require the general contractor to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as five dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.
- The project sponsor would require the general contractor to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.
- The project sponsor would include noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible.
- Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include (1) a procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of neighboring residents and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.

#### Mitigation Measure M-NO-2c: Cumulative Constriction Noise Control Measures

In addition to implementation of Mitigation Measure NO-2a and Mitigation Measure NO-2b (as applicable), prior to the time that construction of the proposed project sponsor would cooperate with and participate in any City-sponsored construction noise control program for the Transit Center District Plan area or other City-sponsored areawide program developed to reduce potential effects of construction noise in the project vicinity. Elements of such a program could include a community liaison program to inform residents and building occupants of upcoming construction activities and, potentially, noise and/or vibration monitoring during construction activities that are anticipated to be particularly disruptive.

#### Mitigation Measure M-HZ-2a—Work Plan for Soil and Groundwater Characterization

The project sponsor shall cause to have implemented a Work Plan for the Characterization of Subsurface Soils and Groundwater for the project site. The Work Plan as approved by the San Francisco Department of Public Health, Environmental Health Section, Hazardous Waste Unit (DPH) includes the following.

Once the existing building has been demolished and debris removed from the site, subsurface investigation of the site will be undertaken. The proposed subsurface investigation will consist of the following:

- Obtain a soil boring permit from DPH;
- Notify Underground Service Alert and a private utility locating service a minimum of 48 hours prior to conducting the field investigation;
- Complete a minimum of three soil borings (two to a depth of 10 feet below the existing basement slab and one to the proposed depth of excavation, approximately 50 feet below grade) in the area proposed to be excavated and to the depth of proposed excavation, at locations to be reviewed and accepted by DPH;
- Collect soil samples in the two shallow borings at depths of approximately 1.5, 3, 5, 7.5, and 10 feet below the basement slab, and in the deeper boring at depths of 1.5, 3, 5, 7.5, 10, 15, 20, 25, 30, 35, 40, 45, and 50 feet below street grade;
- After the deep boring has been advanced to the maximum depth, collect a grab groundwater sample through a slotted, one-inch diameter PVC temporary casing, using a disposable bailer and decanted into appropriately preserved containers;
- Screen all soil samples in the filed for organic vapor and transport all soil and groundwater samples to a laboratory for analysis using chain-of-custody procedures; and
- Prepare a report of the findings.

The soil samples will be analyzed for total recoverable petroleum hydrocarbons (TRPH), total petroleum hydrocarbons (TPH) as gasoline and diesel, volatile organic compounds (VOCS), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), California assessment manual (CAM) 17 metals, leaking underground fuel tank (LUFT) S metals, total lead, asbestos, pH, cyanide, and sulfides. The groundwater sample will be analyzed for the following San Francisco Public Utilities Commission (SFPUC) discharge permit requirements: pH, dissolved sulfides, hydrocarbon oil and grease, total recoverable oil and grease, VOCs, SVOCs, total suspended solids, chemical oxygen demand, CAM 17 metals, phenols, and cyanide.

If the test results indicate elevated total metal concentrations, additional testing for soluble metals, using the California waste extraction test (WET) may be required to assess whether the material is a California hazardous waste. If significant levels of soluble metals are detected, additional analyses using toxicity characteristic leaching procedure (TCLP) may be necessary to determine if the material is a Federal hazardous waste.

#### Mitigation Measure M-HZ-2b—Hazards and Hazardous Materials (Site Mitigation Plan)

If elevated concentrations of heavy metals and/or petroleum hydrocarbons are detected at the Site, prepare a site mitigation plan (SMP) that outlines specific soil handling procedures to be followed during construction. The SMP would also specify basic health and safety concerns to be addressed by the site contractor or subcontractor responsible for worker and public health and safety, through

the preparation of a detailed health and safety plan by the project contractor. The SMP would be sent to DPH for approval prior to any excavation activities.

#### Mitigation Measure M-HZ-2c—Hazards Building Materials

The project sponsor shall ensure that PCB-containing equipment such as fluorescent light ballasts are removed and properly disposed of prior to the start of renovation. Old light ballasts that would be removed during renovation would be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast could not be verified, then they would be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous materials identified either before or during renovation would be abated according to federal, state, and local laws and regulations.

#### G. DETERMINATION

On the basis of this initial study:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

June 1, 2010

**BILL WYCKO** 

**Environmental Review Officer** 

for

JOHN RAHAIM

Director of Planning

Planning Department

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### **APPENDIX B**

Air Quality

#### ENVIRON

August 13, 2010

Mr. Karl Heisler ESA/Environmental Science Associates 225 Bush Street, Suite 1700 San Francisco, CA 94104-4207

Re: Health Risk Assessment for Construction Air Emissions Impacts – 350 Mission Street Development

Dear Mr. Heisler:

ENVIRON International Corporation (ENVIRON) has completed a health risk assessment (HRA) for construction emissions associated with the proposed 350 Mission Street Development ("Project") located in San Francisco, California. The purpose of this evaluation was to assess potential health risks to surrounding sensitive populations during Project construction activities, in accordance with the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Air Quality Guidelines (June 2010).

It is our understanding that the current onsite building will be demolished and replaced with a 24-story, 355-foot-tall office building. The construction activities are expected to take place over a period of 22 months. The location of the nearest sensitive receptor to the Project is the 605-foot-tall Millennium residential tower (approximately 82.5 feet southeast of the Project). A child care facility is also located nearby.

For this evaluation, ENVIRON estimated construction emissions/concentrations (specifically, diesel particulate matter (or DPM) and diesel exhaust speciated chemicals as identified by the BAAQMD) and calculated estimated excess lifetime cancer risks and noncancer hazard indices (acute and chronic). In addition, ENVIRON estimated concentrations of exhaust PM<sub>2.5</sub> related to onsite construction activities. The results of this evaluation have been compared to the BAAQMD CEQA thresholds of significance (June 2, 2010).

#### 1 Objective and Methodology

The June 2010 BAAQMD CEQA Air Quality Guidelines contain recommended thresholds for risks and hazards associated with an individual project that is siting a new source or new sensitive receptor located in the Bay Area that is undergoing environmental review pursuant to CEQA. For construction-related emissions, these significance thresholds include the following:

- An excess lifetime cancer risk level of more than 10 in one million (10 x 10<sup>-6</sup>);
- A noncancer (i.e., chronic or acute) HI greater than 1.0; and

• An incremental increase in the annual average  $PM_{2.5}$  of greater than 0.3 micrograms per cubic meter ( $\mu g/m^3$ ).

The estimated incremental increases in air concentrations were determined through air dispersion modeling of estimated construction emissions. These concentrations, in turn, were used along with toxicity values and human exposure parameter assumptions to estimate excess lifetime cancer risk and noncancer hazard indices. The following sections explain the emissions estimation, air dispersion modeling, and health risk assessment in greater detail.

#### 2 Emissions Estimation and Air Dispersion Modeling Methodologies

#### 2.1 Emissions from Construction Activities

The emission calculations require information on the quantities, types, horsepower ratings, load factors and emission factors of the Project's construction equipment. An inventory of diesel-fueled equipment used for the construction of the Project (e.g., scrapers, loaders) was provided by ESA, and was partially based on the URBan EMISsions Model (URBEMIS 2007) version 9.2.4. ENVIRON made the following assumptions and used the following information about the types of construction equipment in the Project's emission inventory and their usage rates:

- According to ESA, there would be no diesel exhaust emitted from construction equipment during the coating phase.
- Based on information provided by ESA, construction cranes and welders would be powered
  electrically and not by fuel combustion; hence, these were not included in the equipment
  inventory for the emission estimation.
- Based on information provided by ESA, the Project would not need an onsite generator, as electricity would be provided by Pacific Gas & Electric (PG&E).
- Start dates and end dates for each construction phase were provided by ESA to determine the duration of each construction phase (demolition, construction, etc.).
- A 5-day work week (Monday through Friday) was assumed for the construction schedule.
- The same hours of usage for each equipment type as listed in the URBEMIS files provided by ESA were assumed, except for concrete ready-mix trucks.
- ENVIRON assumed that concrete ready-mix trucks would be used during the first half of the
  construction period (ESA info indicated that structural work would occur for half of the 18month construction period).

<sup>&</sup>lt;sup>1</sup> Urban Emissions Model (URBEMIS) (Version 8.7 – 2002 / Version 9.2.4 – 2008). Jones & Stokes Associates. Prepared for: South Coast Air Quality Management District. http://www.urbemis.com

Calendar year-specific unmitigated emission factors were obtained from OFFROAD 2007 emissions database, <sup>2</sup> and were selected based on the horsepower and load factor for each equipment type. Most of these parameters used were based on information was provided by ESA, with the following exceptions:

- For the concrete pump, ENVIRON used OFFROAD data for "Other Industrial Equipment, 600 HP" and a load factor of 0.33 (the load factor was provided by ESA). The URBEMIS file provided by ESA classified this as "other construction equipment", however OFFROAD does not have emissions data for such equipment above 500 horse power (HP); according to ESA info, the concrete pump is 680 HP (the max HP available for "other industrial equipment" is 600 HP)
- For mitigated emissions, ENVIRON used Tier 4-adjusted emissions factors for construction equipment (consistent with the Tier 4 standards in effect at the time of construction), except for the concrete ready-mix trucks
- For concrete ready-mix trucks, ENVIRON used statewide emission factors for Heavy Heavy-Duty on-road trucks in EMFAC, an emissions database for on-road vehicles.<sup>3</sup> Emission estimates using factors from EMFAC depend on the distance travelled by the vehicle. ENVIRON assumed each truck would travel 1,000 feet (at 15 miles/hour) within the Project boundary (for a total of 5,000 feet, or approximately one mile), and that the cumulative time spent idling by the trucks is four hours. This latter estimate assumes that the trucks will idle for as long as the concrete pump is used (which is four hours/day based on ESA information), and that there is one ready-mix truck on-site at any one time.

The emission factor for each piece of equipment was then multiplied by the relevant equipment parameters (i.e. horsepower, load factor, and total hours of operation) to calculate the unmitigated PM emissions. ENVIRON conservatively assumed that 100% of DPM emissions are PM<sub>2.5</sub>.

#### 2.2 Air Dispersion Modeling

ENVIRON performed air dispersion modeling using the United States Environmental Protection Agency's (USEPA) Industrial Source Complex-Short Term Model (ISCST3) with screening meteorological data to estimate incremental DPM and diesel exhaust speciated chemical concentrations from construction activities.<sup>4</sup> The air dispersion analysis was performed in accordance with USEPA, California Air Pollution

<sup>&</sup>lt;sup>2</sup> California Air Resources Board Mobile Source Emissions Inventory Program. December 2006. http://www.arb.ca.gov/msei/offroad/offroad.htm

<sup>&</sup>lt;sup>3</sup> Emission Factors (EMFAC2007) model (Version 2.3). November 2006. California Air Resources Board. http://www.arb.ca.gov/msei/onroad/latest\_version.htm

<sup>&</sup>lt;sup>4</sup> On November 9, 2005, the USEPA promulgated final revisions to the federal *Guideline on Air Quality Models*, in which they recommended that AERMOD be used for dispersion modeling evaluations of criteria air pollutant and toxic air pollutant emissions from typical industrial facilities. A one-year transition period commenced from the proposed effective date of December 9, 2005. Although that one year transition period has elapsed, the BAAQMD continues to recommend using ISCST3, in addition to AERMOD, for these types of evaluations (BAAQMD 2010). Furthermore, due to the lack of representative meteorological data collected in downtown San Francisco, screening meteorological data was used. As the screening version of AERMOD (AERSCREEN) is still undergoing development and is not currently available.

Control Officers Association (CAPCOA), California Air Resources Board (ARB) and BAAQMD modeling guidelines. <sup>5,6,7,8,9</sup> Screening meteorological data were used to estimate the worst one-hour impacts based on the most conservative meteorology.

The air dispersion analysis requires the following: 1) selection of the dispersion model, 2) selection of meteorological data, 3) evaluation of potential terrain considerations, 4) identification of the source specific release parameters, operational schedule, and averaging time periods, and 5) selection of receptor locations.

#### 2.2.1 Air Dispersion Model Selection

As mentioned previously, near-field air dispersion modeling was conducted using USEPA's ISCST3 model. For each receptor location, the model generates air concentrations of different chemicals resulting from emissions from multiple sources. Air dispersion models such as ISCST3 require a variety of inputs such as source parameters, meteorological parameters, topography information, and receptor parameters. In the absence of site-specific information, ENVIRON used default parameter sets that are designed to produce conservative (i.e. overestimates) of air concentrations.

#### 2.2.2 Meteorology

According to the CAPCOA Risk Assessment Guidelines, "Screening surface data may be used in ISCST3 when no applicable surface data is available for the area to be modeled." There is no relevant data set in San Francisco where the Project is located, so the ISCST3 model was used in the screening mode. The screening meteorological data set used is based on the screening data set from USEPA's screening-level air dispersion model SCREEN3, and was revised to include only stability classes A, B, C, and D (which would theoretically be stability classes expected during the daytime, when construction emissions would occur).

#### 2.2.3 Terrain

ISCST3 provides a rural or urban terrain option. ENVIRON conducted modeling in both modes and used the results obtained using the "rural" option, as there were more conservative. Terrain elevations were obtained from USGS National Elevation Dataset (NED) for the Project vicinity and imported to sources and receptors using AERMAP, a data preprocessing module associated with ISCST3.

<sup>&</sup>lt;sup>5</sup> USEPA. 2005. Guideline on Air Quality Models (Revised). 40 Code of Federal Regulations, Part 51, Appendix W. Office of Air Quality Planning and Standards.

<sup>&</sup>lt;sup>6</sup> USEPA. 2005. Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule. 40 CFR Part 51, Appendix W. 70 Federal Register 68218-61. November 9.

<sup>&</sup>lt;sup>7</sup> California Environmental Protection Agency (Cal/EPA). 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

<sup>&</sup>lt;sup>8</sup> BAAQMD. 2005. Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. June.

Ocalifornia Air Pollution Control Officers Association (CAPCOA). 2009. Health Risk Assessment for Proposed Land Use Projects. July. http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA\_HRA\_LU\_Guidelines\_8-6-09.pdf

#### 2.2.4 Source Parameters

Source location and parameter information are necessary to model the dispersion of air emissions. Construction emissions were modeled as an area source covering the Project area, with release height of 10 feet, in accordance with BAAQMD modeling guidance. The air dispersion modeling parameters are summarized in Table 1.

#### 2.2.5 Receptors

As shown in Figure 1, ENVIRON used a fine, 25-meter off-Project grid receptor spacing within 250 meters from the Project boundary; and a coarser, 50-meter receptor grid from 250 meters out to 1,000 meters from the Project boundary. Modeled receptor heights ranged from 0 meters to 8.1 meters above ground level (i.e., approximately three stories high, which is the lowest level at Millenium Tower that contains residences).

#### 2.2.6 Adjustment Factors

The California Environmental Protection Agency (Cal/EPA) recommends that "annual average concentrations for the worker inhalation pathway will need to be adjusted" so that the "average concentration that a worker breathes over his or her working day may be used" for the exposure analysis. Because the air concentrations were modeled assuming a continuous averaging time (i.e., 24 hours, 7 days per week), an adjustment factor, recommended by Cal/EPA, was applied to estimate an exposure point concentration that reflects the exposures by sensitive receptors (workers, residents) that occur for less than 24 hours and are concurrent with construction activities occurring at the Project, as shown in Table 3.

#### 2.3 Estimated DPM Air Concentrations

Air modeling dispersion factors (i.e., concentration per unit emission rate), sometimes called unit emissions dispersion factors, were estimated for the simulated dispersion sources (i.e., construction equipment) as discussed above, using ISC in conjunction with information about the locations of the sources and receptors, as well as assumptions about the nearby land use. The results of the dispersion analysis were used in conjunction with the chemical-specific emissions rates to determine air concentrations. The following equation was used to estimate annual average concentration from the modeled dispersion factor:

Annual Average Concentration = 
$$\left(Q_{annual} \times \left(\frac{\chi}{Q}\right)_{annual}\right)_{i}$$

Where:

Q = emission rate of chemical (grams [g]/second [s])

$$\left(\frac{\chi}{Q}\right)$$
 = unit emissions dispersion factor (µg/m³)/(g/s)

<sup>&</sup>lt;sup>10</sup> Cal/EPA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

#### i = stack source

The modeled concentrations were then used to estimate potential exposures and health risks.

#### 2.4 Estimation of Air Concentrations for Diesel Exhaust Speciated Chemicals

The diesel exhaust speciated chemicals and their respective speciation factors presented in Table 2 were obtained from BAAQMD. <sup>11</sup> According to BAAQMD, the diesel exhaust speciated chemical list and speciation factors are based on USEPA's SPECIATE Version 2.0 database (2008) for construction equipment. Each chemical-specific speciation factor is multiplied by the maximum, 1-hour, off-site air concentration of DPM to obtain chemical-specific incremental air concentrations. The estimated air concentrations are also summarized in Table 2.

#### 3 Risk Assessment Methodology

The following sections discuss the various components required for conducting the HRA in detail. This section identifies the chemicals, human populations potentially exposed, pathways through which exposure may occur, the toxicity information used, and methodology for calculating excess lifetime cancer risk, chronic noncancer HIs and acute noncancer HIs in this HRA.

#### 3.1 Chemical Selection

Based on the evaluation for Project emissions discussed in Section 2, the chemicals addressed in this HRA are DPM for cancer risk and chronic non-cancer hazard impacts, and diesel exhaust speciated chemicals for acute non-cancer health impacts, as identified by the BAAQMD.<sup>12</sup>

#### 3.2 Exposure Assessment: Populations, Pathways and Assumptions

The components of the exposure assessment include the identification of potentially exposed populations, the identification of exposure pathways, estimation of exposure concentrations, and the selection of exposure assumptions to quantify chemical intakes.

As identified in Table 3, populations evaluated in this HRA include off-Project children at a nearby day-care center (PG&E's Children's Center, 77 Beale Street), workers, and residents (adult and child) at the Millennium Tower (450 Mission Street).

The primary exposure pathway identified for the potentially exposed populations within the vicinity of the Project is inhalation. Non-inhalation pathways were considered in accordance with BAAQMD and Cal/EPA guidance. Pursuant to BAAQMD guidance, a multi-pathway analysis is required for chemicals with known cancer and noncancer health effects from non-inhalation pathways. These

<sup>&</sup>lt;sup>11</sup> BAAQMD. 2010. Email from Virginia Lau to Michael Keinath. "Subject: RE: Diesel exhaust speciation for acute impacts". July 13.

<sup>&</sup>lt;sup>12</sup> BAAQMD. 2010. Email from Virginia Lau to Michael Keinath. "Subject: RE: Diesel exhaust speciation for acute impacts". July 13.

<sup>&</sup>lt;sup>13</sup> BAAQMD. 2010. Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

<sup>&</sup>lt;sup>14</sup> Cal/EPA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

chemicals are identified by Cal/EPA (2003). None of the chemicals identified in this HRA are identified for a multi-pathway analysis.

The population-specific exposure assumptions used in this HRA are presented in Table 3. Project construction is anticipated to occur over a 22-month period. As such, the exposure duration assumed for each receptor was limited by the planned construction period of 22 months or 1.83 years. This is a conservative assumption that assumes the earliest possible start date for construction. Exposure durations for the populations evaluated are presented in Table 3.

#### 3.2.1 Calculation of Intake

The intake factor for inhalation, IF<sub>inh</sub>, can be calculated as follows:

 $IF_{inh} = \underline{DBR \times ET \times EF \times ED \times T \times CF \times ASF}$   $AT \times 24 \text{ (hours/day)}$ 

Where:

IF<sub>inh</sub> = Intake Factor for Inhalation (m<sup>3</sup>/kg-day)

DBR = Daily Breathing Rate (L/kg-day)

ET = Exposure Time (hours/day)

EF = Exposure Frequency (days/year)

ED = Exposure Duration (years)

T = Modeling-adjustment factor (unitless)

CF = Conversion Factor (m<sup>3</sup>/L)

ASF = Age Sensitivity Factor (unitless)

AT = Averaging Time (days)

#### 3.3 Toxicity Assessment

The toxicity values for DPM and diesel exhaust speciated chemicals used in this HRA are summarized in Table 4. Consistent with Cal/EPA risk assessment guidance, ENVIRON used the Cal/EPA cancer potency factor (CPF) and chronic reference exposure level (REL) for DPM to estimate cancer risks and noncancer chronic HIs, respectively, associated with exposure to diesel emissions (Cal/EPA 2009b). <sup>15</sup> An acute REL for diesel exhaust has not been published by Cal/EPA. However, per BAAQMD recommendations, <sup>16</sup> ENVIRON used Cal/EPA acute RELs for chemicals contained in the diesel exhaust speciation profile provided by BAAQMD to evaluate acute impacts associated with exposure to diesel emissions.

#### 3.3.1 Age-Sensitivity Factors

The 2010 BAAQMD CEQA Guidelines recommend estimation of cancer risk using methods from the Office of Environmental Health Hazard Assessment (OEHHA) recently released Technical Support Document for Cancer Potency Factors: Methodologies for Derivation, Listing of Available Values, and

<sup>&</sup>lt;sup>15</sup> California Environmental Protection Agency (Cal EPA). 2009. Toxicity Criteria Database. July 21.

<sup>&</sup>lt;sup>16</sup> Bay Area Air Quality Management District (BAAQMD). 2010. Email from Virginia Lau to Michael Keinath.

<sup>&</sup>quot;Subject: RE: Diesel exhaust speciation for acute impacts". July 13.

Adjustment to Allow for Early Life Stage Exposures. <sup>17,18</sup> The OEHHA Technical Support Document (TSD) proposes the use of age-specific sensitivity factors (ASFs) to account for an "anticipated sensitivity to carcinogens" of infants and children to carcinogens. Under the revised approach, cancer risk estimates are weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to two years of age and by a factor of three for exposures that occur from two years through 15 years of age. No weighting factor (i.e., an ASF of one, which is equivalent to no adjustment) is applied to ages 16 to 70 years.

ENVIRON used the guidelines provided by BAAQMD and in the OEHHA TSD to develop ASF values for this HRA as presented in Table 3.

#### 3.4 Risk Characterization

#### 3.4.1 Estimation of Cancer Risks

The following equation was used to calculate excess lifetime cancer risk:

 $Risk_i = C_i \times CF \times IF_{inh} \times CPF_i$ 

Where:

Risk<sub>i</sub> = Lifetime Excess Cancer Risk from exposure to chemical<sub>i</sub> C<sub>i</sub> = Annual Average Air Concentration for chemical<sub>i</sub> (μg/m³)

CF = Conversion Factor  $(mg/\mu g)$ 

IF<sub>inh</sub> = Intake Factor for Inhalation (m<sup>3</sup>/kg-day)

 $CPF_i = Cancer Potency Factor for chemical_i (mg/kg/day)^{-1}$ 

Carcinogenic risks are estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens.<sup>19</sup> The estimated risk is expressed as a unitless probability.

#### 3.4.2 Estimation of Chronic Noncancer Hazard Quotients/Indices

The potential for exposure to result in chronic noncancer effects is evaluated by comparing the estimated annual average air concentration (which is equivalent to the average daily air concentration) to the noncancer chronic REL for DPM. When calculated for a single chemical, the comparison yields a ratio termed a hazard quotient (HQ). To evaluate the potential for adverse chronic noncancer health effects from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding an HI.

<sup>&</sup>lt;sup>17</sup> BAAQMD. 2010. California Environmental Quality Act Air Quality Guidelines. June.

<sup>&</sup>lt;sup>18</sup> Cal/EPA. 2009. Technical Support Document for Cancer Potency Factors: Methodologies for Derivation, Listing of Available Values, and Adjustment to Allow for Early Life Stage Exposures. May.

<sup>&</sup>lt;sup>19</sup> Cal/EPA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

The equation used to calculate the HQs is:

 $HQ_i = C_i / cREL_i$ 

Where:

HQ<sub>i</sub> = Hazard Quotient for Chemical<sub>i</sub>

 $C_i$  = Average Daily Air Concentration for Chemical<sub>i</sub> ( $\mu g/m^3$ )

cREL<sub>i</sub> = Chronic Noncancer Reference Exposure Level for Chemical<sub>i</sub> (µg/m³)

#### 3.4.3 Estimation of Acute Noncancer Hazard Quotients/Indices

The potential for acute effects was evaluated by comparing the annual one-hour maximum concentration with the acute REL for diesel exhaust speciated chemicals. The equations used to calculate acute HQs and HIs are as follows:

 $HQi = C_i/cREL_i$ 

 $HI = \Sigma HQ_i$ 

where:

HQ<sub>i</sub> = Hazard Quotient for chemical<sub>i</sub>

 $C_i$  = Average Daily Air Concentration for chemical i ( $\mu g/m^3$ )

cREL<sub>i</sub> = Chronic noncancer Reference Exposure Level for chemical<sub>i</sub> (µg/m³)

H! = Hazard Index

#### 4 Risk Assessment Results

As summarized in Table 5, for an off-Project day-care child, worker, and adult resident, the maximum estimated excess lifetime cancer risks are less than the BAAQMD CEQA significance threshold of 10 in a million ( $10 \times 10^6$ ); the maximum estimated chronic noncancer HI is less than 1.0; the maximum estimated acute noncancer HI is less than 1.0; and the maximum estimated PM<sub>2.5</sub> concentration in air would be less than 0.3  $\mu$ g/m³.

If you have any questions or need further information, please contact Liz at (415-796-1938) or Michael (510-420-2539).

Sincerely,

[Signed] [Signed]

Elizabeth A. Miesner Michael Keinath
Principal Senior Manager

#### Attachments:

Figure 1 – Project Location and Modeled Receptor Locations

Table 1 – Air Dispersion Modeling Parameters

Table 2 – Air Dispersion Modeling Results

Table 3 – Exposure Assumptions

Table 4 – Toxicity Values

Table 5 - Construction Emissions - Off-Project Cancer Risks, Noncancer Hazard Indices, and  $PM_{2.5}$  Concentrations

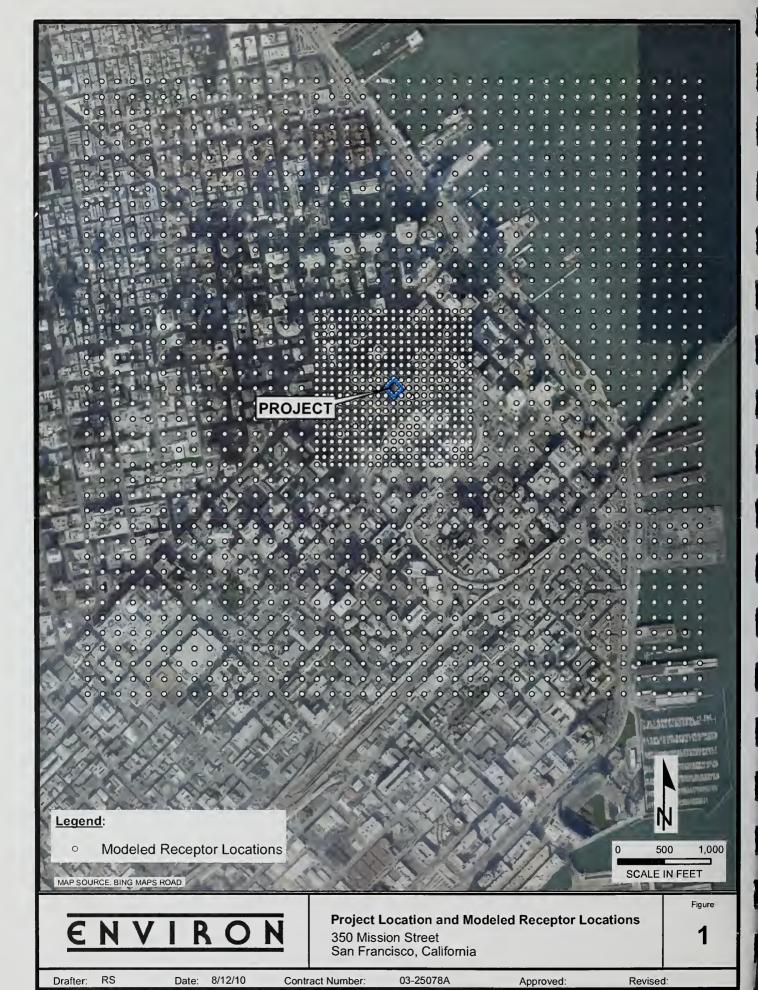


Table 1
Air Dispersion Modeling Parameters
350 Mission Street Development San Francisco, California

	Coorc	Coordinates			Modeling P	Modeling Parameters <sup>a</sup>
Source	UTMx (meters)	UTMx UTMx (meters)	Total Area Elevation (m²) (meters)	rea Elevation (meters)	Release height (meters)	Initial vertical dimension (meters)
Construction Equipment	553,093	553,093 4,182,791	1,668.75	4.1	3.04	0.71

Abbreviations:  $m^2$  = square meter

## Notes:

<sup>a</sup> Based on guidance from Bay Area Air Quality Management District (BAAQMD).

<u>Sources:</u>
Bay Area Air Quality Management District (BAAQMD). 2010. Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 1.0. May.

Table 2
Air Dispersion Modeling Results
350 Mission Street Development
San Francisco, California

Pollutant	Averaging Period	Speciated Component	Speciation Factor <sup>a</sup>	Incremental Concentration <sup>b</sup> (ug/m³)	BAAQMD Threshold <sup>c</sup> (ug/m³)	Exceeds Threshold?
PM <sub>2.5</sub>	Annual	NA	-	0.13	0.3	No
DPM	Annual	N/A	1	0.13	N/A	N/A
		Acetaldehyde	0.07353	9.85E-02	N/A	W/A
		Acrolein	0.01297	1.74E-02	N/A	N/A
		Eenzaldehyde	66900.0	9.36E-03	N/A	N/A
		Benzene	0.02001	2.68E-02	N/A	N/A
		Ethanol	0.00699	1.21E-04	N/A	V/V
		Ethylbenzene	0.00305	4.09E-03	N/A	N/A
		Ethylene	0.14377	1.93E-01	N/A	V/N
		Ethylene Dibromide (1,2-Dibromoethane)	Unknown		N/A	N/A
		Ethylene Dichloride (1,2-Dichloroethane)	Unknown		N/A	V/V
		Ethylene Glycol	Unknown		N/A	V/N
		Ethylene Oxide (1,2-Epoxyethane)	Unknown		N/A	V/N
		Ethylene Thiourea	Unknown		N/A	N/A
Speciated		Ethylene Glycol Butyl Ether	Unknown	-	N/A	V/N
Diesel	1-hr Maximum	1-hr Maximum Ethylene Glycol Ethyl Ether	Unknown		N/A	W/A
Exhaust		Ethylene Glycol Ethyl Ether Acetate	Unknown		N/A	N/A
		Ethylene Glycol Methyl Ether	Unknown		N/A	N/A
		Ethylene Glycol Methyl Ether Acetate	Unknown	-	N/A	N/A
		Formaldehyde	0.14714	1.97E-01	N/A	N/A
		lsobutane	0.01222	1.64E-02	N/A	N/A
		leopentane	0.00602	8.07E-03	N/A	N/A
		Nethane	0.04084	5.47E-02	N/A	N/A
		Mathyl Ethyl Ketone (MEK) (2-Butanone)	0.01477	1. <b>6</b> 4E-02	N/A	N/A
		N ethylcyclopentane	0.00149	2.t0E-03	N/A	N/A
		nh-Xylene	0.00611	2.10E-03	N/A	N/A
		n-Butane	0.00104	1.39E-03	N/A	N/A
		n-Hexane	0.00157	2.10E-03	N/A	N/A
		n-Pentane	0.00175	2.34E-03	N/A	N/A

# Air Dispersion Modeling Results 350 Mission Street Development San Francisco, California

Pollutant	Averaging Period	Speciated Component	Speciation Factor <sup>a</sup>	Incremental Concentration <sup>b</sup> (ug/m³)	BAAQMD Threshold <sup>c</sup> (ug/m³)	Exceeds Threshold?
		o-Xylene	0.00335	4.49E-03	N/A	N/A
		Propionaldehyde	0.0097	1.30E-02	N/A	N/A
Speciated	1	Propylene	0.02597	3.48E-02	N/A	N/A
Diesei	I-nr Maximum	Propylene Glycol Monomethyl Ether	Unknown		N/A	N/A
		Propylene Oxide	Unknown		N/A	N/A
		Toluene	0.01473	1.97E-02	N/A	N/A

Abbreviations:
BAAQMD = Bay Area Air Quality Management District
CEQA = California Environmental Quality Act

DPM = diesel particulate matter

m<sup>3</sup> = cubic meter

PM<sub>2.5</sub> = Particulate matter with an aerodynamic diameter of 2.5 micrometers or smaller.

ug = microgram

<sup>a</sup> Speciation factors obtained from BAAQMD (BAAQMD 2010b).

<sup>b</sup> Concentrations above represent 1-hr maximum concentrations or annual average concentrations. <sup>c</sup> BAAQMD thresholds from June 2010 CEQA Air Quality Guidelines (BAAQMD 2010a).

Sources:
Bay Area Air Quality Management District (BAAQMD). 2010a. California Environmental Quality Act Air Quality Guidelines. June.
Bay Area Air Quality Management District (BAAQMD). 2010b. Email from Virginia Lau to Michael Keinath. "Subject: RE: Diesel exhaust speciation for acute impacts". July 13.

350 Mission Street Development San Francisco, California **Exposure Assumptions** Table 3

					Rec	eptor	Receptor Population			
Parameter Definition		Units	Day Care	a	VAC also			Res	Resident	
			Child	V	WOLKE		Adult		Child	
Daily Breathing Rate		L/kg-day	581	а	149	а	302	a	581	a
Exposure Time		hours/day	10	е	8	a,b	24	а	24	а
Exposure frequency		days/year	245	a,c	245	а	350	в	350	а
Exposure duration		years	1.83	р	1.83	р	1.83	a	1.83	Р
Modeling Adjustment Factor		unitless	3.4	е	4.2	f	1	g	1	б
Conversion Factor 1		m <sub>3</sub> /L	0.001		0.001		0.001		0.001	
Conversion Factor 2	٥	day/24 hours	0.042		NA		0.042		0.042	
Age Sensitivity Factor		unitless	10	a,h	1	а	1	a,i	10	a,j
Averaging time		days	25,550		25,550		25,550		25,550	
Inhalation Intake Factor		m³/kg-day	1.4E-01		1.1E-02		7.6E-03		1.5E-01	

Equation used: |Finh = DBR \* ET \* EF \* ED \* T \* CF1 \* CF2 \* ASF / AT

## Abbreviations:

Cal/EPA = California Environmental Protection Agency BAAQMD = Bay Area Air Quality Management District kg = kilogram

L = Liter

ug = microgram NA = Not Applicable  $m^3 = \text{cubic meters}$ mg = milligram

## 350 Mission Street Development San Francisco, California **Exposure Assumptions** Table 3

- <sup>a</sup> BAAQMD 2010.
- <sup>b</sup> The daily breathing rate rate for a worker is representative of an 8-hour work day (Cal/EPA 2003). Thus, adjustment for exposure time (ET) is not necessary.
- ° Since a day care child will attend day care during a parent's work hours, the exposure frequency of a day care child reflects the exposure frequency of a worker.
- d Construction at the Site is expected to occur for approximately 22 months, or 1.83 years.
- e Since the annual average concentrations were estimated assuming continuous exposure (i.e., 24 hours per day, 7 days per week), an adjustment must be applied to location 10 hours per day, 5 days per week (BAAQMD 2010). Therefore, a factor of 3.4 (equal to 24 hours/10 hours\*7 days/5 days) was applied to account for the the modeling to account for the time the receptor is actually present at school or work (Cal/EPA 2003). The day care child is assumed to be present at a daycare difference in exposure time.
- Since the annual average concentrations were estimated assuming continuous exposure (i.e., 24 hours per day, 7 days per week), an adjustment must be applied to the modeling to account for the time the receptor is actually present at work (Cal/EPA 2003). The worker is assumed to be at a work location 8 hours per day, 5 days per week (BAAQMD 2010). Therefore, a factor of 4.2 (equal to 24 hours/8 hours\*7 days/5 days) was applied to the modeling to account for the time the receptor is actually present at work (Cal/EPA 2003).
- <sup>9</sup> Modeling adjustment not necessary for residential receptors.
- h Day care centers conservatively assumed to accept children as young as 6 weeks old. Therefore, the age sensitivity factor (ASF) of 10 was applied to account for a day care child age 6 weeks to approximately 2 years.
- A resident adult was assumed to represent age 16 years and older.
- Construction at the Site is expected to occur for approximately 1.83 years. Therefore, the age sensitivity factor (ASF) of 10 was applied to account for a resident child age 0 to 1.83 years.

Sources:
Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August. California Environmental Protection Agency (Cal/EPA). 2003.

Table 4
Toxicity Values<sup>a</sup>
350 Mission Street Development
San Francisco, California

Chemical	Inhalation Cancer Potency Factor <sup>b</sup>	Chronic Inhalation Reference Exposure Level <sup>c</sup>	Acute Inhalation Reference Exposure Level <sup>c</sup>
	(mg/kg-day) <sup>-1</sup>	ug/m³	<sub>E</sub> ɯ/ɓn
DPM	1.10E+00	5.00E+00	
Acetaldehyde			4.70E+02
Acrolein			2.50E+00
Benzaldehyde			
Benzene			1.30E+03
Ethanol			
Ethylbenzene			
Ethylene			
Ethylene Dibromide (1,2-Dibromoethane)			
Ethylene Dichloride (1,2-Dichloroethane)			
Ethylene Glycol			
Ethylene Oxide (1,2-Epoxyethane)			
Ethylene Thiourea			
Ethylene Glycol Butyl Ether			1.40E+04
Ethylene Glycol Ethyl Ether			3.70E+02
Ethylene Glycol Ethyl Ether Acetate			1.40E+02
Ethylene Glycol Methyl Ether			9.30E+01
Ethylene Glycol Methyl Ether Acetate			
Formaldehyde			5.50E+01
Isobutane			
Isopentane			
Methane			
Methyl Ethyl Ketone (MEK) (2-Butanone)			1.30E+04
Methylcyclopentane			)
m-Xylene			2.20E+04
n-Butane			
n-Hexane			
n-Pentane			
o-Xylene			2.20E+04

## 350 Mission Street Development San Francisco, California Toxicity Values<sup>a</sup> Table 4

Chemical	Inhalation Cancer Potency Factor <sup>b</sup>	Chronic Inhalation Reference Exposure Level <sup>c</sup> Exposure Level	Acute Inhalation Reference Exposure Level <sup>c</sup>
	(mg/kg-day) <sup>-1</sup>	ug/m³	ng/m³
Propionaldehyde			
Propylene			
Propylene Glycol Monomethyl Ether			
Propylene Oxide			3.10E+03
Toluene			3.70E+04

## Abbreviations:

[mg/kg-day]<sup>-1</sup> = per milligram per kilogram-day ---- = Value not available or applicable ug/m3 = micrograms per cubic meter DPM = Diesel Particulate Matter

exposure level for DPM, per Cal/EPA recommendations (2003). Acute noncancer effects were evaluated with acute reference exposure levels for chemicals contained in the diesel exhaust speciation profile, per BAAQMD (2010) <sup>a</sup> Cancer risk and chronic noncancer effects were evaluated with cancer potency factor and chronic reference <sup>b</sup> Cal/EPA 2009.

° Cal/EPA 2008.

## Sources:

Bay Area Air Quality Management District (BAAQMD). 2010. Email from Virginia Lau to Michael Keinath. "Subject: RE: Diesel exhaust speciation for acute impacts". July 13.

California Environmental Protection Agency (Cal/EPA). 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. August.

California Environmental Protection Agency (Cal/EPA). 2008. OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary. Office of Environmental Health Hazard Assessment. December 18. California Environmental Protection Agency (Cal/EPA). 2009. Toxicity Criteria Database. July 21.

Construction Emissions - Off-Project Cancer Risks, Noncancer Hazard Indices, and PM2.5 Concentrations 350 Mission Street Development San Francisco, California Cancer Risk (per million) 0.3 9 9 9

Concentration

PM 2.5

(ng/m<sub>3</sub>) <sub>p</sub>

Index b,c Hazard Acute

Index a,b

Scenario

Day Care Child d

Worker

Resident, Adult e Resident, Child e

Chronic Hazard

Table 5

0.13

0.011

0.027

## Abbreviations:

BAAQMD CEQA Threshold (BAAQMD, 2010)

CEQA = California Environmental Quality Act, BAAQMD Thresholds Adopted June 2010 BAAQMD = Bay Area Air Quality Management District PM2.5 = Fine particulate matter

ug/m3 = microgram per cubic meter

<sup>a</sup> Chronic hazard index conservatively represents the maximum, annual average, off-site air concentration of DPM compared to the noncancer chronic REL for DPM.

construction activities. The location of the receptor for the cancer risk and chronic hazard index is different than the <sup>o</sup> Values reported represent the maximum, worst case estimates using the maximum concentrations modeled from receptor for the acute hazard index.

chemical contained in the diesel exhaust speciation profile. Individual HQs represent the maximum, 1-hour, off-site air concentration of each diesel exhaust speciation chemical compared to chemical-specific noncancer acute RELs. <sup>c</sup> Acute hazard index conservatively represents the sum of individual HQs (Hazard Quotients) calculated for each

<sup>3</sup> Cancer risk value reported represents the maximum value estimated at the PG&E Children's Center.

<sup>a</sup> Cancer risk value reported represents the maximum value estimated at Millennium Tower.

Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

Unmitigated Construction Emissions - Off-Project Cancer Risks, Noncancer Hazard Indices, and PM2.5 350 Mission Street Development San Francisco, California Table 6

Scenario	Cancer Risk (per million)	Chronic Hazard Index <sup>a,b</sup>	Acute Hazard Index <sup>b,c</sup>	PM 2.5 Concentration (ug/m³) <sup>b</sup>
Day Care Child <sup>d</sup>	127			
Worker	21	7	•	0
Resident, Adult e	4	4.	t Ö	o. _
Resident, Child <sup>e</sup>	74			
BAAQMD CEQA Threshold (BAAQMD, 2010)	10	1	1	0.3

## Abbreviations:

BAAQMD = Bay Area Air Quality Management District

CEQA = California Environmental Quality Act, BAAQMD Thresholds Adopted June 2010

PM2.5 = Fine particulate matter

ug/m3 = microgram per cubic meter

### Notes:

**Bold** entries signifiy exceedance of BAAQMD CEQA Threshold.

<sup>a</sup> Chronic hazard index conservatively represents the maximum, annual average, off-site air concentration of DPM compared to the noncancer chronic REL for DPM.

construction activities. The location of the receptor for the cancer risk and chronic hazard index is different than the <sup>b</sup> Values reported represent the maximum, worst case estimates using the maximum concentrations modeled from receptor for the acute hazard index.

chemical contained in the diesel exhaust speciation profile. Individual HQs represent the maximum, 1-hour, off-site air <sup>c</sup> Acute hazard index conservatively represents the sum of individual HQs (Hazard Quotients) calculated for each concentration of each diesel exhaust speciation chemical compared to chemical-specific noncancer acute RELs.

<sup>d</sup> Cancer risk value reported represents the maximum value estimated at the PG&E Children's Center.

e Cancer risk value reported represents the maximum value estimated at Millennium Tower.

### Sources

Bay Area Air Quality Management District (BAAQMD). 2010. BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. January.

#### Health Risk Screening Assessment (HRSA) of the Standby Generator at 350 Mission

The building at 350 Mission Street in San Francisco proposes to install a standby emergency diesel generator on the roof of the building, which is about 360 feet high. The estimated power rating of the standby generator is 800 KW. A new generator that burns ultra-low sulfur diesel fuel is expected to emit diesel particulate matter (DPM) at the rate of 0.12 grams/KW-hr, which has been determined by CARB to be Best Available Control Technology (BACT). Per BAAQMD regulations, an emergency generator is permitted to operate for 50 hours per year for testing and maintenance. Assuming that the generator will operate at full load during the allowed 50 hours of testing, diesel particulate matter (DPM) emissions are estimated to be:

 $0.12 \text{ g/KW-hr} \times 800 \text{ KW} \times 50 \text{ hrs/yr} \times 16/453.6 \text{ grams} = 10.58 \text{ lbs/yr}$ 

Because the estimated emissions during testing would exceed the BAAQMD trigger level of 0.58 lb/yr for DPM, a risk screening must be performed.

#### Modeling

Exposure levels of toxic air contaminants from the proposed standby generator were estimated by conducting screening dispersion modeling of DPM emissions from testing and maintenance activities. To determine the worst case exposure, DPM emissions were modeled using the EPA model SCREEN3. Stack operating parameters of a typical 800 KW diesel generator were input to the model, along with dimensions of the building upon which the generator will be placed. Because the generator is located on the building roof, stack emissions would be subject to downwash which is caused by air flow around the building. Immediately downwind of the emission source, a recirculation cavity would be formed by the building, in which pollutants can be entrained within the cavity. Consistent with OEHHA Risk Assessment Guidelines, concentrations should be estimated within the cavity that is caused by the building. The SCREEN3 model calculates one-hour average concentrations within the cavity, as a function of the building dimension. The maximum one hour concentration in the region cavity region immediately downwind of the emission source, and at nearby receptors that border the cavity is estimated to be  $0.022 \, \mu g/m^3$ . The results of the SCREEN3 run are given in Table 1.

The maximum one-hour concentrations can be converted to annual average concentrations using OEHHA recommended adjustment factors. According to the OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, the annual adjustment factor ranges between 0.06 and 0.1, and the typical recommended adjustment factor is 0.08. These factors are designed to bias predicted longer-term averaging periods towards overestimation (OEHHA, 2003). For the purpose of this analysis, the typical adjustment factor of 0.08 was used to determine annual average DPM concentrations. This results in a maximum annual average concentration of 0.0018  $\mu g/m^3$ .

#### TABLE 1. CAVITY CALCULATION FROM SCREEN3 MODEL RUN

```
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
Standby Generator testing - 50 hrs/yr
SIMPLE TERRAIN INPUTS:
                      POINT
 SOURCE TYPE =
 EMISSION RATE (G/S) = 0.152000E-03
 STACK HEIGHT (M) = 110.0000
 STK INSIDE DIAM (M) =
                        0.2000
 STK EXIT VELOCITY (M/S)= 20.0000
 STK GAS EXIT TEMP (K) = 533.0000
 AMBIENT AIR TEMP (K) = 293.0000
 RECEPTOR HEIGHT (M) = 1.8000
 URBAN/RURAL OPTION =
                          URBAN
 BUILDING HEIGHT (M) = 100.0000
 MIN HORIZ BLDG DIM (M) = 46.0000
 MAX HORIZ BLDG DIM (M) = 46.0000
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.
BUOY. FLUX = 0.883 \text{ M}^{**4/S}^{**3}; MOM. FLUX = 2.199 \text{ M}^{**4/S}^{**2}.
*** FULL METEOROLOGY ***
************
  *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
WITH ORIGINAL SCREEN CAVITY MODEL
    (BRODE, 1988)
*** CAVITY CALCULATION -
CONC (UG/M**3) = 0.2203E-01
CRIT WS @10M (M/S) = 1.00
CRIT WS @ HS (M/S) = 1.62
DILUTION WS (M/S) = 1.00
CAVITY HT (M) = 187.99
CAVITY LENGTH (M) = 115.46
ALONGWIND DIM (M) = 46.00
  ************
  *** SUMMARY OF SCREEN MODEL RESULTS ***
```

BLDG. CAVITY  $0.2203E-01 \mu g/m^3$ 

#### Cancer Risk

The maximum incremental cancer risk from exposure to DPM was calculated following the guidelines established by California Office of Environmental Health Hazard Assessment (OEHHA, 2003). The equation used to determine exposure to DPM through inhalation is given below:

Per OEHHA Guidelines, the 80<sup>th</sup> percentile adult breathing rate of 302 L/kg-day was used to determine cancer risks to residents from exposure to DPM. The exposure frequency and duration was assumed to be 350 days per year and 70 years for residents. The modeled DPM concentrations discussed previously were used to represent the concentrations of DPM in the air. The inhalation absorption factor was assumed to be 1. To determine incremental cancer risk the estimated dose through inhalation was multiplied by cancer potency slope factor for DPM, 1.1 (mg/kg-day)<sup>-1</sup>.

As shown below, risk at the maximum exposed individual would be approximately **0.57 in one** million. This incremental level is below the CEQA significance threshold of 10 in one million.

## Risk Calculation: Dose-inhalation $= 0.02 \,\mu\text{g/m}^3 * 302 \,\text{L/kg-day} * 1 * 350 \,\text{days/year} * 70 \,\text{years} * 10^{-6}$ $= 0.52 * 10^{-6}$ Cancer Risk $= 0.52 * 10^{-6} \,\text{mg/kg-day} * 1.1 \,(\text{mg/kg-day})^{-1}$ $= 0.57 * 10^{-6}$ $\sim 0.57 \,\text{in one million}$

In a recent publication by BAAQMD (May 2010), recommendations were made to follow OEHHA's Technical Support Document (TSD) for Cancer Potency Factors (May 2009) in the calculation of cancer risk estimates should also incorporate age sensitivity factors (ASFs). The revised TSD provides updated calculation procedures that factor in the increased susceptibility of

infants and children to carcinogens compared to adults. The updated procedure incorporates age-specific when calculating risks to infants and children. OEHHA recommends that cancer risks be weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and by a factor of 3 for exposures from 2 years through 15 years of age. For estimating cancer risks for residential receptors, the incorporation of the ASFs results in a cancer risk adjustment factor (CRAF) of 1.7, where cancer risks for residential receptors would include the CRAF according to the equation, below.

Cancer Risk = Dose \* CRAF \* Cancer Potency

The maximum cancer risk with this correction factor would be 0.97 in one million. This impact is less than the significance threshold of 10 in one million.

#### Non-Cancer Risks

OEHHA has assigned diesel exhaust a chronic Reference Exposure Level (REL) of  $5.0 \,\mu g/m^3$ . This REL represents the level below which no adverse health effects to the respiratory system are expected to occur. As shown above, the proposed generator testing would increase concentrations of DPM by  $0.0018 \,\mu g/m^3$  at the maximum exposed receptor. Therefore, the chronic hazard quotient for exposure to DPM would be approximately 0.0004, which is below the CEQA significance threshold of 1.0.

#### References

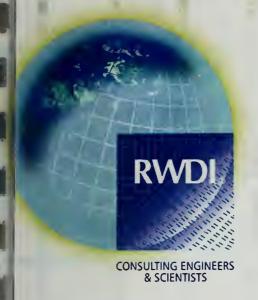
BAAQMD, May 2010. Recommended Methods for Screening and Modeling Local Risks and Hazards.

http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD\_CEQA Modeling Approach May 2010.ashx

- California Air Pollution Control Officers Association (CAPCOA), 2009. *Health Risk Assessments for Proposed Land Use Projects*, approved for release July 2009.
- Office of Environmental Health Hazards Assessment (OEHHA), 2003. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, available online at: <a href="http://www.oehha.org/air/hot\_spots/pdf/HRAguidefinal.pdf">http://www.oehha.org/air/hot\_spots/pdf/HRAguidefinal.pdf</a>.

#### **APPENDIX C**

Wind Analysis Technical Memorandum



#### **FINAL REPORT**

#### PEDESTRIAN WIND STUDY 350 MISSION STREET SAN FRANCISCO, CALIFORNIA

Project Number: #1011406

June 1, 2010

SUBMITTED TO: David Wall

**GLL Development and Management** 

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#### **APPENDICES**

Appendix A: Drawing List for Model Construction
Appendix B: San Francisco Planning Code Section 148

Figure 2: Location of Wind Speed Measurements

Figure 1c: Wind Tunnel Study Model – Project plus Cumulative Configuration



#### 1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by GLL Development and Management c/o Pound Management, Inc., to conduct a Pedestrian Wind Study for the proposed 350 Mission Street Project in San Francisco, California. The purpose of the study was to assess the wind environment around the development in terms of pedestrian comfort and hazard relative to wind metrics specified in the San Francisco Planning Code Section 148. The study objective was achieved through wind tunnel testing of a 1:400 (1" = 33") scale model for the following four development configurations:

**A – Existing:** all existing buildings on-site and in the surroundings;

B - Existing plus Project: proposed 350 Mission Street Project present with

existing surrounding buildings;

C-Project plus Cumulative: proposed 350 Mission Street Project with existing

surrounding buildings, as well as anticipated proposed

buildings; and,

**D** – Existing plus Cumulative: existing surrounding buildings, as well as anticipated

proposed buildings without the proposed project.

The project site is located in the North Beach District in the eastern portion of San Francisco's downtown core. The development site is located at the northeast corner of the intersection of Mission Street and Fremont Street. The proposed building is approximately 365' tall consisting of a 27 storey tower with a similar building footprint as the existing Heald College building on the site. The test model was constructed using the design information and drawings listed in Appendix A.

This report summarizes the methodology of the wind tunnel studies for pedestrian wind conditions, describes the wind comfort and wind hazard criteria associated with wind force, as used in the current study, and presents the test results and recommendations of conceptual wind control measures, where necessary.

The placement for wind measurement locations was based on our experience and understanding of pedestrian usage for this site, and reviewed by ESA|Environmental Science Associates, and Reuben & Junius, LLP, and the Environmental City Planner, Brett Bollinger.



#### 2. PRINCIPAL RESULTS

The results of the tests are discussed in detail in Section 5 of this report and may be summarized as follows:

- All test locations met the wind hazard criterion for the Existing, Existing plus Proposed, Project plus Cumulative, and Existing plus Cumulative configurations.
- Wind comfort conditions for the Existing plus Project configuration were similar to the
  existing conditions. Wind speeds increased noticeably for the Project plus Cumulative
  configuration. The wind speeds increase was primarily caused by wind accelerations
  between the anticipated proposed buildings, not by the project building. This was
  confirmed by the similar wind results for the Existing plus Cumulative configuration.

#### 3. METHODOLOGY

#### 3.1 WIND TUNNEL TESTING

As shown in Figures 1a through 1d, the wind tunnel model included the project site and all relevant surrounding buildings and topography within a 1500 ft radius of the study site. The mean speed profile and turbulence of the natural wind approaching the modelled area were simulated in RWDI's boundary-layer wind tunnel. The model was instrumented with 70 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 5 ft. These measurements were recorded for 36 equally incremented wind directions; however, as required by the Planning Code, the analysis focused on the west-southwest, west, west-northwest and northwest wind directions.

#### 3.2 LOCAL CLIMATE

Wind speeds in San Francisco are the highest in the summer and lowest in winter. However the strongest peak winds occur in winter. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. Of the primary wind directions, four have the greatest frequency of occurrence and subsequently make up the majority of the strong winds that occur. These winds include the northwest, west-northwest, west and west-southwest.

Data describing the speed, direction, and frequency of occurrence of winds were gathered at the old San Francisco Federal Building at 50 United Nations Plaza (at a height of 132 ft.) during the



six-year period, 1945 to 1950. Measurements taken hourly and averaged over one-minute periods have been tabulated of each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 70% of all winds blow from five of the 16 directions as follows: Northwest (NW), 20%; West-Northwest (WNW), 14%; West (W), 35%; West-Southwest (WSW), 2%; Southwest (SW), 9%; and all other winds, 28%. Calm conditions occur 2% of the time. More than 90% of measured winds over 13 mph blow from these directions.

#### 3.3 SAN FRANCISCO PLANNING CODE REQUIREMENTS

This project is located in an area that is subject to the San Francisco Planning Code Section 148, Reduction of Ground-level Wind Currents in C-3 Districts. The Planning Code specifically outlines wind reduction criteria for the C-3 District. This analysis is performed using the wind testing analysis and evaluation methods to determine conformity with the Code. These requirements are described in Planning Code Section 148 (see Appendix B).

The Planning Code requires buildings to be shaped so as not to cause ground-level wind currents to exceed defined comfort and hazard criteria. The comfort criteria are that wind speeds will not exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. Similarly, the hazard criterion of the Code requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph as averaged from a single full hour of the year. These comfort criteria are based on wind speeds that are measured for one minute and averaged. In contrast, the hazard criterion is based on winds that are measured for one hour and averaged; when stated on the same basis as the comfort criteria winds, the hazard criterion speed is a one-minute average of 36 mph, to distinguish between the wind comfort conditions and hazardous winds. The Planning Code defines these wind speeds in terms of equivalent wind speeds, and average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

The equivalent wind speeds were calculated according to the specifications in the San Francisco Planning Code Section 148, whereby the mean hourly wind speed is increased when the turbulence intensity is greater than 15% according to the following formula:

$$EWS = Vm(2*TI+0.7)$$

Where: EWS =equivalent wind speed

Vm = mean pedestrian-level wind speed

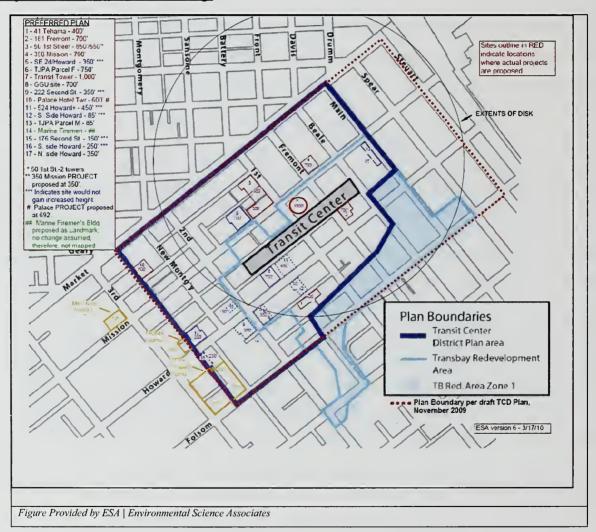
TI = turbulence intensity



#### 3.4 CUMULATIVE CONFIGURATION

Anticipated proposed/future buildings are located to the east (TJPA Parcel M), to the south (Transit Tower, 181 Freemont, TJPA Parcel F, 524 Howard+, S. Side Howard, and 41 Tehama), to the southwest (SE 2d/Howard, 222 Second St., 176 Second St., SFRA, MOMA, Mex. Mus., and Palace Hotel Tower) and to the west (GGU site, and 50 1st Street).

#### Projects in the Cumulative Setting:





#### 4. TEST RESULTS

Table 1, located in the tables section of this report, presents the wind comfort results for the four configurations tested. For each measurement point, the measured 10% exceeded (90<sup>th</sup> percentile) equivalent wind speed and the percentage of time that the wind speed exceeds 11 mph is shown for areas considered to be used primarily for walking. A lower-speed criterion (7 mph exceeded 10% of the time) has also been used, which applies to "seating" areas, and in most cases refers to publicly accessible (although often privately owned) open spaces with passive pedestrian activities intended.

Table 2 presents the wind hazard results, and lists the predicted wind speed to be exceeded one hour per year. The predicted number of hours per year that the Section 148 wind hazard criterion (26 mph) is exceeded is also provided.

Wind speed measurements were taken at 67 locations for the Existing and Existing plus Cumulative Configurations and at 70 locations for the Existing plus Project and the Project plus Cumulative configurations, including 3 locations (68, 69 and 70) on the proposed 350 Mission Street building. Figure 2 depicts these locations on and around the project site.

#### 4.1 WIND COMFORT CONDITIONS

For the Existing Configuration in the vicinity of the project site, wind conditions were generally sheltered with wind speeds averaging 9 mph. The highest wind speed occurred at the north end of Fremont Street (18 mph at Location 11, see Figure 2 and Table 1). In the Existing Configuration, wind speeds at 49 of the 67 test locations currently meet the Planning Code's 11 or 7 mph pedestrian-comfort criterion.

At the ten test locations immediately adjacent to the project site (Locations 1 through 7, and 60 through 62), the 10% wind speeds range from 5 to 8 mph, none of which exceed the pedestrian comfort criterion.

With the Existing plus Project Configuration in place, winds generally remain the same; the average wind speed for all test locations remains 9 mph. The highest wind speed was also recorded at the north end of Fremont Street (20 mph at Location 11) with the Existing plus Project in place. In the Existing plus Project configuration, 51 of the 70 test locations had wind speeds that met the Planning Code's 11 or 7 mph pedestrian-comfort criterion.



Immediately adjacent to the proposed project site (Locations 1 through 7, and 60 through 62), wind speeds ranged from 6 to 8 mph, similar to the existing conditions. None of these ten test locations had winds that exceeded the pedestrian comfort criterion stipulated in the Planning Code.

For the Project plus Cumulative configuration, winds increased with speeds averaging 11 mph. However, the highest wind speed remained at 20 mph to the north of the proposed site on the east side of Fremont Street (Location 11). With the Project plus Cumulative configuration, the number of exceedences of the comfort criteria increased from the Existing plus Project configuration from 19 to 34.

At the ten test locations immediately adjacent to the project site (Locations 1 through 7, and 60 through 62), wind speeds range from 6 to 17 mph. With the Project plus Cumulative configuration in place, four test locations at the northwest corner of the proposed building (Locations 3 through 6) had winds that exceeded the pedestrian comfort criterion. The wind conditions in this area are due to winds from the northwest and west-northwest directions accelerating around the southwest corner of the adjacent building to the north. The flow continued down Freemont Street and through the alley between the buildings to the north of the proposed building.

For the Existing plus Cumulative configuration, wind conditions remain similar to those recorded in the Project plus Cumulative configuration; the average wind speed was 10 mph versus 11 mph for the Project plus Cumulative configuration. The number of comfort criteria exceedences was reduced slightly from 34 to 31. However, one of these previous exceedences was at the terrace level of the proposed development, so cannot be considered relevant. Many of the reductions were marginal (i.e. wind speeds at Location 24 were reduced from 12 mph in the Project plus Cumulative configuration to 11 mph in the Existing plus Cumulative configuration).

#### 4.2 WIND HAZARD CONDITIONS

All of the 67 test locations currently meet the wind hazard criterion for the Existing configuration.

The proposed 350 Mission Street building (Project) and the anticipated proposed/future buildings in the Project plus Cumulative and Existing plus Cumulative configurations did not add any exceedences of the wind hazard criterion.



#### 4.3 RECOMMENDATIONS

There are no recommendations necessary with respect to the wind hazard criterion. If improved wind comfort is desired, particularly at seating areas, wind mitigation in the form of landscaping, trellises, and/or wind screens could be considered to break up wind flows (see Images 1 through 4). The model tested in the wind tunnel used the City of San Francisco's standard testing methodology, which does not account for the street furniture, landscaping, etc. present in the area. Depending on the placement and density of such elements, the wind comfort conditions recorded could be improved to be suitable for the intended usage at all but the most extreme cases. The impact of these elements in wind reduction tends to be localized, whereas high wind speeds were predicted only in areas away from the development site. Therefore, it was determined that the potential for effective on-site wind control measures was limited.

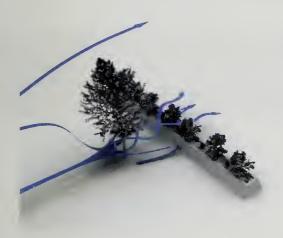


Image 1 – Landscaping



**Image 3** – Example Trellis

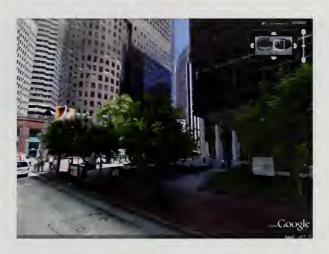


Image 2 – Landscaping at Location 11 (image courtesy of Google Earth 'm)



Image 4 - Example Wind Screen



#### 5. APPLICABILITY OF RESULTS

The results presented in this report pertain to the model of the proposed 350 Mission Street Project constructed using the architectural design drawings listed in Appendix A. Should there be design changes that deviate from this list of drawings, the results presented may change. Therefore, if substantial changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

## TABLES



Table 1: Comfort Results

	Exceeds	Φ	Φ	Φ	Φ	Φ	Φ			Φ	Φ	Φ		Φ	Φ	စ	Φ	Φ	Φ	Φ	Φ
nulative	Speed Change Relative to Existing (mph)	4	80	1	10	7	6	2	-	7	-	0	ņ	2	-	4	9	ю	-	ကု	ကု
Existing + Cumulative	Percent of Time Wind Speed Exceeds 11mph	13%	23%	31%	33%	24%	21%	%0	1%	20%	20%	40%	1%	14%	2%	14%	38%	35%	27%	18%	3%
Ð	Wind Speed Exceeded 10% of Time (mph)	12	14	17	17	15	4	7	αο	14	13	18	80	12	10	12	18	17	15	13	<b>о</b>
	Exceeds			ø	9	ø	9			e	o o	 9		9	9		ø	Φ	Φ	Φ	Φ
ulative	Speed Change Relative to Project (mph)	1	4	6	1	7	2	-	-	7	0	0	7	2	က	-	7	2	7	-2	ကု
Project + Cumulative	Percent of Time Wind Speed Exceeds 11mph	2%	%9	24%	33%	22%	13%	%0	1%	20%	16%	44%	8%	14%	13%	2%	37%	31%	23%	20%	2%
d	Wind Speed Exceeded 10% of Time (mph)	6	10	15	17	14	12	7	80	14	12	20	11	12	12	о О	18	16	14	14	<b>o</b>
	Exceeds										Φ	 <b>a</b>	Φ		<b>e</b>			<b>a</b>	<b>.</b>	9	e
												 	_								
roject	Speed Change Relative to Existing (mph)	0	0	0	٦	7	2	-	0	0	0	2	-	0	0	0	٦	0	-	-	-
Existing + Project	Percent of Time Wind Speed Exceeds 11mph	1%	%0	%0	%0	%0	%0	%0	%0	%0	15%	44%	12%	%9	4%	1%	10%	21%	24%	32%	16%
	Wind Speed Exceeded 10% of Time (mph)	∞	9	9	9	7	7	9	7	7	12	20	12	10	o	∞	7	41	15	16	12
		T																			
tion	Exceeds										Φ	<u> </u>			O O		Φ	Ф	Ф	Φ	Φ
Existing Configuration	Percent of Time Wind Speed Exceeds 11mph	1%	%0	%0	%0	%0	%0	%0	%0	%0	13%	41%	10%	2%	3%	1%	14%	21%	23%	30%	13%
Existing	Wind Speed Exceeded 10% of Time (mph)	80	9	9	7	80	2	2	7	7	12	18	=	10	ი	∞	12	14	14	16	12
References	Comfort Criterion Speed (mph)	1	7	7	7	7	7	7	7	=	=	7	7	7	7	=	Ξ	7	7	7	7
Refe	Location	-	2	က	4	c)	9	7	œ	o	10	7	12	13	14	. 51	16	17	18	19	20



Table 1: Comfort Results

nulative	Speed Change Relative to Existing (mph)	2	4	2	2	4	-	2	ო	-	-	-	2	-	-	2	7	0	0	ന	2
Existing + Cumulative	Percent of Time Wind Speed Exceeds 11mph	3%	%2	3%	10%	10%	%9	16%	5%	%9	4%	11%	13%	18%	20%	17%	1%	1%	5%	38%	24%
Û	Wind Speed Exceeded 10% of Time (mph)	8	10	o	1	11	10	12	6	10	10	11	12	12	13	13	7	80	80	17	14
	Exceeds	Φ			Φ			Φ		_	_	 		Φ	Ф	Φ	Ф	Φ	Φ	Φ	Ф
ulative	Speed Change Relative to Project (mph)	9	4	2	m	4	~	m	2	2	-	 -	-	-	-	-	0	0	-	4	2
Project + Cumulative	Percent of Time Wind Speed Exceeds 11mph	14%	%9	2%	12%	%8	2%	18%	1%	10%	%2	%2	10%	17%	21%	18%	2%	1%	2%	38%	79%
а.	Wind Speed Exceeded 10% of Time (mph)	12	10	<b>б</b>	12	=	თ	13	∞	=	10	10	=	12	13	13	o	∞	o	18	15
	Exceeds														Φ	Φ	Φ	Φ	Φ	Φ	Φ
oject	Speed Change Relative to Existing (mph)	0	0	0	0	0	7	0	0	0	1	0	0	0	-	1	0	0	0	0	1
Existing + Project	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	2%	1%	1%	%9	%0	2%	4%	%9	10%	10%	16%	16%	2%	1%	1%	24%	20%
ä	Wind Speed Exceeded 10% of Time (mph)	9	9	7	6	7	œ	10	9	6	<b>o</b>	10	1	1	12	12	80	80	80	14	13
_	Exceeds														Φ.		O)	Φ	ø.	O)	Ф
Existing Configuration	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	2%	%0	2%	%9	%0	2%	2%	2%	7%	10%	15%	10%	1%	1%	1%	22%	17%
Existing C	Wind Speed Exceeded 10% of Time (mph)	9	9	7	<b>o</b>	7	<b>o</b>	10	9	6	∞	10	10	=	12	Ξ	œ	œ	∞	14	12
References	Comfort Criterion Speed (mph)	11	11	11	17	1	7	1	7	11	1	11	1	1	7	1	7	7	7	+	7
Refer	Location	21	22	23	24	25	56	27	28	59	90	31	32	33	34	35	36	37	38	39	40

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Table 1: Comfort Results

	Exceeds	9	Φ	Φ									Φ	Φ							
nulative	Speed Change Relative to Existing (mph)	2	-	-	0	-	0	-	7	-	ო	7	2	2	-5	-	?	7	-5	ო	0
Existing + Cumulative	Percent of Time Wind Speed Exceeds 11mph	22%	17%	13%	10%	10%	2%	3%	3%	1%	2%	13%	72%	23%	10%	%	10%	2%	13%	3%	%0
G	Wind Speed Exceeded 10% of Time (mph)	14	12	12	#	τ-	80	6	6	80	6	Ξ	15	14	11	80	7	80	1	6	9
	Exceeds	Φ	ø	o	O								Φ	Φ					Φ		
ulative	Speed Change Relative to Project (mph)	. 2	2	-	-	-	0	0	-	2	2	2	2	4	ကု	-	-5	2	2	က	2
Project + Cumulative	Percent of Time Wind Speed Exceeds 11mph	25%	20%	17%	15%	10%	2%	4%	%9	1%	1%	10%	72%	21%	10%	1%	10%	5%	21%	2%	1%
Ā	Wind Speed Exceeded 10% of Time (mph)	15	13	12	12	=	∞	<b>o</b>	10	œ	∞	=	15	41	=	∞	Ξ	∞	14	6	<b>∞</b>
	Exceeds	a										 			Φ		Φ		Φ		
oject	Speed Change Relative to Existing (mph)	1	0	0	0	0	0	-	7	٢	0	0	0	-	-	0	0	0	7	0	0
Existing + Project	Percent of Time Wind Speed Exceeds 11mph	18%	10%	10%	10%	%2	2%	4%	3%	%0	%0	3%	8%	%9	22%	%0	19%	%0	14%	%0	%0
Ш	Wind Speed Exceeded 10% of Time (mph)	13	17	1	1	10	∞	6	6	9	9	6	10	10	14	7	13	9	12	9	9
_																					
on	Exceeds	٥													Φ		Φ		Φ		
Existing Configuration	Percent of Time Wind Speed Exceeds 11mph	16%	10%	10%	10%	4%	3%	1%	2%	%0	%0	2%	%2	4%	18%	%0	19%	%0	16%	%0	%0
Existing (	Wind Speed Exceeded 10% of Time (mph)	12	11	1	1	10	∞	∞	10	7	9	6	10	<b>о</b>	13	7	13	9	13	9	9
References	Comfort Criterion Speed (mph)	7			<del></del>	7	1	7	1		1	1-	1	7	7	=	7	7	7	7	7
le le	Location																				



Speed Change Relative to Existing (mph)

+ Cumulative

# Table 1: Comfort Results

Existing + Cum	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	%0	%0	1%	1%	N/A	N/A	N/A		11%	Existing + Cumulative
ú	Wind Speed Exceeded 10% of Time (mph)	9	9	9	7	7	7	7	N/A	A/N	N/A		10 mph	Existing
	Exceeds						Φ				Φ			
lative	Speed Change Relative to Project (mph)	-	7	0	0	0	-	-	0	е	2		2 mph	34
Project + Cumulative	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	%0	%0	1%	1%	%0	%0	2%		11%	Project + Cumulative
ď	Wind Speed Exceeded 10% of Time (mph)	7	9	9	9	7	80	7	9	7	10		11 mph	Project +
	Exceeds								<u> </u>					
oject	Speed Change Relative to Existing (mph)	0	0	0	0	0	0	0	N/A	A/A	A/N		0 mph	19
Existing + Project	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	%0	%0	%0	%0	%0	%0	%0		%9	+ Project
	Wind Speed Exceeded 10% of Time (mph)	9	7	9	9	7	7	9	ဖ	4	လ		4dm 6	Existing + Project
_	Exceeds											]		
Existing Configuration	Percent of Time Wind Speed Exceeds 11mph	%0	%0	%0	%0	%0	%0	%0	N/A	N/A	N/A		%9	18
Existing (	Wind Speed Exceeded 10% of Time (mph)	9	7	9	9	7	7	9	N/A	N/A	N/A		9 mph	Existing
References	Comfort Criterion Speed (mph)	11	7	1	7	7	7	7	7	7	7		ph and %	ses
Refe	Location	61	62	63	25	92	99	29	89	69	70		Average mph and %	Exceedances

Note: Locations 68 - 70 are on the terrace level of the proposed building, therefore these locations do not exist in the Existing and Existing plus Cumulative Configuration.

2 mph

N/A Ϋ́



Table 2: Wind Hazard Results

| Hours<br>Change<br>Relative<br>to<br>to<br>Existing              | 0  | 0  | 0   | 0   | 0  | 0   | 0  
  | 0   | 0  
   
   | 0   |  | 0  | 0   
  | 0   | 0   | 0  | 0   | 0         | 0   
   | 0   | 0   |
|--|--|--|---|---|--|---
---|---
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--|---|--|--|--
---|---|--|---|-----------|---
---|---|
| Hours per<br>Year Wind<br>Speed<br>Exceeds<br>Hazard<br>Criteria | ,<br>1   | ^  | ^   | <u>^</u>  | ^  | <u>^</u>  | ,<br>1   
  | ^   | ^  
   
   | <u>^</u>  |  | <u>`</u>   | <u>^</u>  
  | ^   | ^   | ^  | ^   | ^         | ,<br>_  
   | ^   | ^   |
| Wind Speed<br>Exceeded<br>1hourfyear<br>(mph)                    | 20   | 25   | 59  | 30  | 25   | 24  | 12   
  | 14  | 24   
   
   | 23  |  | 32   | 15  
  | 21  | 18  | 21   | 30  | 59        | 56  
   | 52  | 16  |
| Exceeds  |  | -  | -   | -   |  |   |  
  | _   |  
   
   |   | -  |  | =   
  |   | -   | =  | _   | -         | -   
   | _   |   |
| Hours<br>Change<br>Relative<br>to Project                        | 0  | 0  | 0   | 0   | 0  | 0   | 0  
  | 0   | 0  
   
   | 0   |  | 0  | 0   
  | 0   | 0   | 0  | 0   | 0         | 0   
   | 0   | 0   |
| Hours per<br>Year Wind<br>Speed<br>Exceeds<br>Hazard<br>Criteria | ۲ ×  | <u>^</u>   | <u>^</u>  | ^<br>_  | ,<br>_   | ,<br>1  | ,<br>1   
  | <u>^</u>  | ,<br>1   
   
   | <u>^</u>  |  | ۲<br>۲   | <u>^</u>  
  | <u>^</u>  | ^<br>_  | ,<br>1   | ,<br>_  | ,<br>_    | <u>^</u>  
   | <u>^</u>  | <u>^</u>  |
| Wind<br>Speed<br>Exceeded<br>1hour/year<br>(mph)                 | 16   | 18   | 26  | 59  | 24   | 20  | 12   
  | 15  | 24   
   
   | 22  |  | 35   | 20  
  | 21  | 21  | 16   | 30  | 28        | 26  
   | 27  | 16  |
| Exceeds  | 1  |  | _   |   |  |   |  
  |   |  
   
   |   |  |  | | |
  |   |   |  |   |           |   
   |   |   |
| Hours<br>Change<br>Relative<br>to Existing                       | 0  | 0  | 0   | 0   | 0  | 0   | 0  
  | 0   | 0  
   
   | 0   |  | 0  | 0   
  | 0   | 0   | 0  | 0   | 0         | 0   
   | 0   | 0   |
| Hours per<br>Year Wind<br>Speed<br>Exceeds<br>Hazard<br>Criteria | ۲۷   | ^  | <u>۲</u>  | ٠<br>۲  | ,<br>,   | ۲<br>۲  | ۲<br>۲   
  | ٠<br>۲  | ٠<br>۲   
   
   | <u>^</u>  |  | ₹  | ^   
  | <u>^</u>  | <u>۲</u>  | ٠<br>۲   | ^   | ,<br>,    | ٠<br>۲  
   | <u>۸</u>  | <u>۲</u>  |
| Wind Speed<br>Exceeded<br>1hour/year<br>(mph)                    | 14   | 15   | 12  | 12  | 4  | 12  | 41   
  | 13  | 15   
   
   | 21  |  | 34   | 20  
  | 18  | 16  | 15   | 20  | 24        | 25  
   | 28  | 23  |
| - CVOODE   |  |  |   |   |  |   |  
  |   |  
   
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  |   |   |  |   |           |   
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   |   |  | _  | | |
  |   |   |  | _   |           |   
   |   |   |
| Hours pe<br>Year Win<br>Speed<br>Exceeds<br>Hazard<br>Criteria   | ^ 1  | <u>^</u>   | ^   | ,<br>-  | ,<br>-   | ,<br>-  | ,<br>-   
  | ,<br>-  | ,<br>-   
   
   | ^   |  | <u>^</u>   | ^   
  | <u>^</u>  | ,<br>-  | ,<br>-   | ,<br>L  | ,<br>-    | ^   
   | ^   | ,<br>-  |
| Wind<br>Speed<br>Exceeded<br>1hour/year<br>(mph)                 | 16   | 13   | 12  | 13  | 13   | 10  | 10   
  | 12  | 14   
   
   | 20  |  | 32   | 19  
  | 17  | 16  | 13   | 21  | 23        | 24  
   | 27  | 73  |
|  |  |  |   |   |  |   |  
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|  | Hours per Year Wind Speed Year Wind Speed Speed Change Exceeded Speed Sp | Hours per Year Wind Speed Year Wind Hours per Year Wind Speed Speed Change Speed Change Chang | Hours per Year Wind Speed Speed Speed Speed Speed Citeria         Wind Speed Inburryear Exceeds Citeria         Wind Speed Speed Speed Speed Speed Speed Speed Speed Inburryear Exceeds Inburryear Inpurryear Inpurryear Inpurryear Information Citeria         Hours per Wind Speed Speed Speed Speed Speed Inpurryear Inpurryear Inpurryear Inpurryear Inpurryear Inpurryear Inpurryear Information Citeria         Hours per Wind Speed Speed Speed Speed Speed Inpurryear In | Wind Hours per Nord Speed Year Wind Speed Year Wind Speed Change Speed Change Exceeded Speed Change (mph) Criteria (mph) Criteria | Wind Speed Speed Speed (mph)         Wind Speed (mph)         Year Wind Speed (mph)         Hours per Speed (mph)         Wind Speed Speed (parameter)         Wind Speed (parameter)         Wind Speed (parameter)         Hours per Speed (parameter)         Wind Speed (parameter)         Hours per Speed (parameter)         Hours per Speed (parameter)         Wind Speed (parameter)         Hours per Speed (parameter) | Wind Speed Sp | Wind Speed Speed Speed (mph)         Wind Speed Speed (mph)         Verwind Speed Speed (mph)         Hours per Speed Speed (pange (mph))         Wind Speed Speed (pange (mph))         Wind Speed Speed (pange (mph))         Wind Speed (pange (mph))         Wind Speed (pange (mph))         Wind Speed (pange (mph))         Wind Speed (pange (pange (mph))         Proceeded (pange (mph))         Exceeded (pange (mph))         Exceeded (pange (mph))         Exceeded (pange (mph))         Proceeded (pange (mph))         Exceeded (pange (mph))         Proceeded (pange | Wind Speed Speed Speed (mph)         Hours per Vind Speed (mph)         Wind Speed (mph)         Hours per Vind Speed (mph) | Wind Speed Speed Speed (inph)         Hours per Acar Wind Speed (inph)         Wind Speed (inph)         Wind Speed (inph)         Hours per Acar Wind Speed (inph)         Hours per Acar Wind Speed (inph)         Hours per Acar Wind Speed (inph)         Hour Man Speed (inph)         Speed (inph) <th< th=""><th>Virid Speed S</th><th>Wind Speed         Hours per Nind Speed         Hours per Nind Speed         Hours per Nind Speed         Hours per Speed         Wind Speed         Hours per Speed         Wind Speed         Hours per Speed         Wind Speed         Hours per Speed         Hours per Nind         H</th><th>Wind Speed         Hours per Nord Spee</th><th>Wind Speed         Hours per Numb         Hours per N</th><th>Wind Speed Speed Speed (Speed Speed S</th><th>Wind Speed Speed (Checked Exceeded Exceeded (Checked Exceeded Exceeded Exceeded (Checked Exceeded (Checked Exceeded (Checked Exceeded Exceeded (Checked /th><th>Vind Exceeded (mph)         Four year Vind (mph)         Hours per (mph)         H</th><th>Wind Speed Sp</th><th>  Hours per</th><th>Wind Speed Speed (Thours) per Speed (Thours) pe</th><th>  Hours per Speed   /th><th>Hours per Vara Wind Speed   Hours per Vara Wind Speed   Year Wind Speed   Year Wind Speed   Year Wind Speed   Speed   Change   Speed   Speed   Change   Speed   Speed   Change   Speed   Change   Speed   Speed   Speed   Change   Speed   /th></th<> | Virid Speed S | Wind Speed         Hours per Nind Speed         Hours per Nind Speed         Hours per Nind Speed         Hours per Speed         Wind Speed         Hours per Speed         Wind Speed         Hours per Speed         Wind Speed         Hours per Speed         Hours per Nind         H | Wind Speed         Hours per Nord Spee | Wind Speed         Hours per Numb         Hours per N | Wind Speed Speed Speed (Speed Speed S | Wind Speed Speed (Checked Exceeded Exceeded (Checked Exceeded Exceeded Exceeded (Checked Exceeded (Checked Exceeded (Checked Exceeded Exceeded (Checked | Vind Exceeded (mph)         Four year Vind (mph)         Hours per (mph)         H | Wind Speed Sp | Hours per | Wind Speed Speed (Thours) per Speed (Thours) pe | Hours per Speed   Speed | Hours per Vara Wind Speed   Hours per Vara Wind Speed   Year Wind Speed   Year Wind Speed   Year Wind Speed   Speed   Change   Speed   Speed   Change   Speed   Speed   Change   Speed   Change   Speed   Speed   Speed   Change   Speed   Speed |



# Table 2: Wind Hazard Results

lative	Hours Change Relative to to Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing + Cumulative	Hours per Year Wind Speed Exceeds Hazard Criteria	2	^	^ 	, _	, _	, _	^ 	^	^	<u>^</u>	^	<u>^</u>	^	^	^	<u>^</u>	<u>^</u>	^	^	^
Exis	Wind Speed Exceeded 1hour/year (mph)	19	18	16	20	21	20	22	17	18	17	50	21	23	24	24	16	13	15	31	25
	Exceeds													·							
ative	Hours Change Relative to Project	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project + Cumulative	Hours per Year Wind Speed Exceeds Hazard Criteria		<u>^</u>	, _	^ _	, _	, _	, _	, _	, _	, _	, _	<u>^</u>	, _	, 	, _	, _	, _	^ _	^	, 1
Proj	Wind Speed Exceeded Thour/year (mph)	21	18	15	21	20	20	23	16	20	18	19	21	21	24	24	15	15	15	31	26
	Exceeds					-															
ect	Hours Change Relative to Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing + Project	Hours per Year Wind Speed Exceeds Hazard Criteria	^ 1	^	, _	^ _	<u>^</u>	<u>^</u>	, _	<u>^</u>	<u>^</u>	^	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>	<u>^</u>	, _	<u>^</u>	^	^
Ē	Wind Speed Exceeded Thour/year (mph)	10	11	13	16	13	4	18	11	18	18	18	20	21	23	23	15	14	14	56	24
	Exceeds											 						-			
Existing Configuration	Hours per Year Wind Speed Exceeds Hazard	, -	, _	, ,	, ,	, ,	, ,	, ,	, -	, ,	<u>,</u>		<u>^</u>	, ,	, _	, _	, _	, _	, _	<u>^</u>	, _
Existing C	Wind Speed Exceeded Thour/year (mph)	12	12	13	15	13	15	18	12	17	17	18	19	20	22	21	15	13	13	25	23
References	Location Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40



Table 2: Wind Hazard Results

lative	Hours Change Relative to to Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing + Cumulative	Hours per Year Wind Speed Exceeds Hazard Criteria	, -	, L	۸ ۲	^	^	^	, -	۸ ۲	, -	<u>^</u>	<u>^</u>	<u>۸</u>	<u>^</u>	<u>۲</u>	, -	, ,	, ,	, -	, -	۲ >
Exis	Wind Speed Exceeded 1hour/year (mph)	25	22	21	21	21	17	19	16	14	16	50	27	25	22	13	21	18	50	17	11
	Exceeds																				
lative	Hours Change Relative to Project	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project + Cumulative	Hours per Year Wind Speed Exceeds Hazard Criteria	۲. ۲.	, _	, -	, L	, 1	, -	^	, 1	, -	<u>^</u>	<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>	, 1	, 1	^ _	, 1	, _	۲ >
Pro	Wind Speed Exceeded Thour/year (mph)	25	22	21	22	20	17	19	17	15	16	19	56	. 54	21	14	21	16	24	16	14
_	SD000V7	·																			
	Exceeds											 									
ject	Hours Change Relative to Existing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing + Project	Hours per Year Wind Speed Exceeds Hazard Criteria	, -	, _	, -	<u>^</u>	<u>^</u>	, -	, -	<u>^</u>	, -	<u>^</u>	<u>^</u>	, _	<u>^</u>	, _	, ,	<u>^</u>	, _	, -	, L	· 1
Ex	Wind Speed Exceeded Thour'year (mph)	23	21	20	21	19	17	19	16	12	14	16	19	18	25	13	25	12	22	12	13
	Exceeds	1										 									
ion																					
Existing Configuration	Hours per Year Wind Speed Exceeds Hazard Criteria	, -	^ _	^ _	^	^	^	^	^ _	^	^	^	^	^	^	^	^	^	^	^	۲ ۸
Existing	Wind Speed Exceeded 1hour/year (mph)	21	19	19	19	18	18	15	18	13	13	15	19	17	73	13	52	1	22	12	13
References	Location	41	42	43	44	45	46	47	48	49	20	51	52	53	54	25	99	22	28	59	09



Table 2: Wind Hazard Results

Exceeds										
Hours Change Relative to to Existing	0	0	0	0	0	0	0	0	0	0
Hours per Year Wind Speed Exceeds Hazard Criteria	, -	^	^	^	^	^	^	^	, _	^
Wind Speed Exceeded 1hour/year (mph)	1	7	10	7	14	14	17	7	7	7
Exceeds	_									
Hours Change Relative to Project	0	0	0	0	0	0	0	0	0	0
Hours per Year Wind Speed Exceeds Hazard Criteria	<u>^</u>	<u>^</u>	^	^	^	<u>^</u>	^	^	^	^
Wind Speed Exceeded 1hour/year (mph)	13	13	12	12	14	14	17	13	12	17
Typeens										
Hours Change Relative to Existir	0	0	0	0	0	0	0	N/A	N/A	N/A
Hours per Year Wind Speed Exceeds Hazard Criteria	, -	, -	, -	, -	, _	^ _	, -	, -	, _	, L
Wind Speed Exceeded 1hour/year (mph)	41	14	12	7	12	12	13	14	6	6
Exceeds										
Hours per Year Wind Speed Exceeds Hazard Criteria	<u>^</u>			, ,	·	<u>^</u>	<u>.</u>	N/A	N/A	N/A
Wind Speed Exceeded Thour/year (mph)	13	14	12	12	12	12	4	N/A	N/A	N/A
	Wind Hours per Wind Speed Year Wind Speed Year Wind Speed Speed Change Exceeded Speed Change Exceeded Speed Change Hours Exceeded Speed Change Hours Exceeded Speed Change Hazard to Existing Un (mph) Criteria (mphh) Criteria (mphhh) Criteria (mphhh) Criteria (mphhh) Criteria (mphhhh) Criteria (mphhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhh	Wind Speed Year Wind Speed Speed Change Exceeded Speed Change Change Exceeded Exceeded Exceeded Exceeded Exceeded Exceeded Speed (mph) Criteria Chieria Change Thourlyear Hazard to Existing (mph) Criteria Change Thourlyear Hazard to Existing Chieria Change Thourlyear Hazard to Existing Chieria Change Thourlyear Hazard to Project Thourlyear Hazard Chieria Ch	Wind Speed Year Wind Speed Year Wind Speed Speed Change Exceeded Speed Change Exceeded Speed Change Exceeded Speed Change (mph) Criteria (mph	Wind Speed Year Wind Speed Speed Change Exceeded Exceeded Exceeded Exceeded Exceeded Speed (mph) Criteria (mph) Criteria <a href="https://example.com/"></a>	Wind Speed Sp	Wind Speed Speed Speed (mph)         Hours per Vear Wind Speed (mph)         Hours per Speed (mph)         Hours per Speed (mph)         Hours per Speed (mph)         Hours per Speed (mph)         Hour	Wind Speed Speed Speed Speed (mph)         Hours per Charge (mph)         Wind Speed Speed Speed Speed Speed (mph)         Hours per Speed Spe	Wind Speed Speed Speed Speed Faze Wind Speed Speed Speed Speed Intourivear Exceeded Speed S	Vear Wind Speed Speed Change Exceeded Speed (Titler)         A change Speed (Titler)         Speed Speed (Titler)         Speed Speed (Titler)         Speed (Title	Wind Speed         Wind Speed         Hours per Vear Wind Speed         Wind Speed         Year Wind Speed Speed         Proceeded Speed Speed         Speed Speed Speed Speed         Speed S

Note: Locations 68 - 70 are on the terrace level of the proposed building, therefore these locations do not exist in the Existing and Existing plus Cumulative Configurations.

0 hrs

0 hrs

19 mph

0 hrs

0 hrs

20 mph

0 hrs

0 hrs

17 mph

0 hrs

Average mph and hours per year Exceedances

Existing + Project

17 mph Existing

0

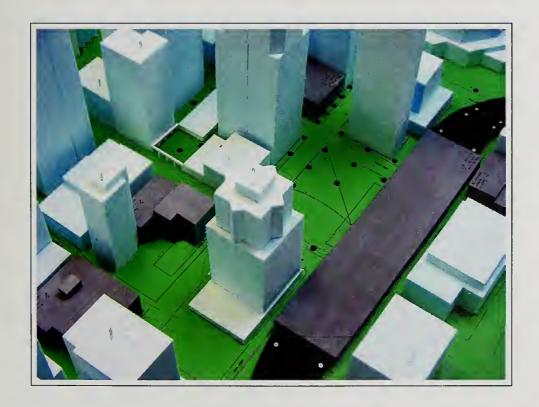
Existing + Cumulative

0

Project + Cumulative

## FIGURES





Wind Tunnel Study Model Existing Configuration

350 Mission Street San Francisco, CA

Figure:

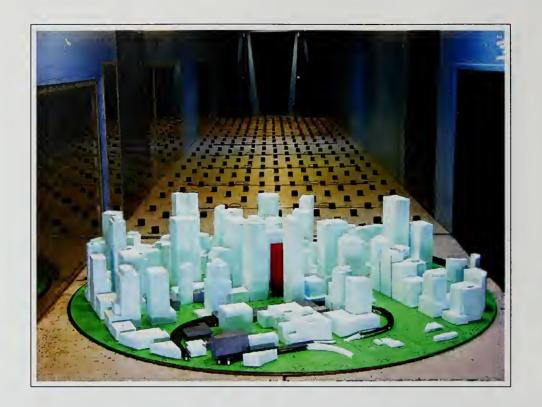
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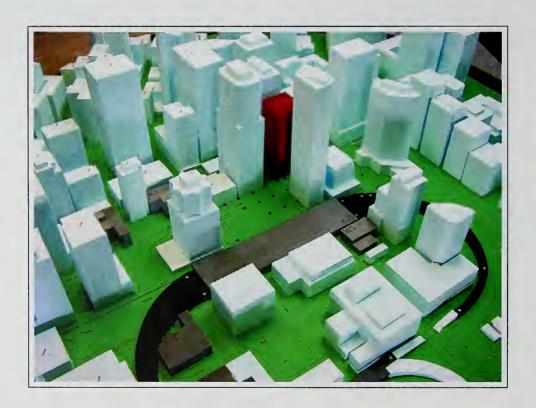
Date:

Project #1011406

April 7, 2010







Wind Tunnel Study Model Existing plus Project Configuration

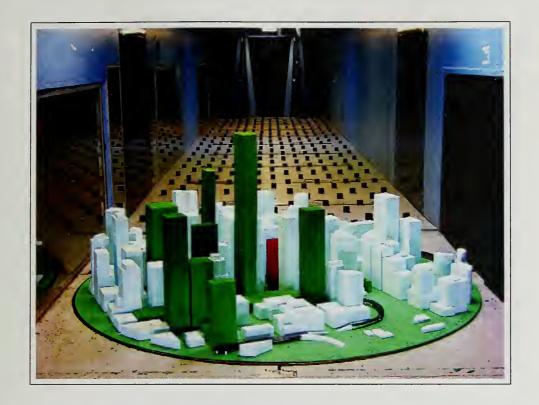
350 Mission Street San Francisco, CA

Project #1011406

Figure: 1b

Date: April 7, 2010







Wind Tunnel Study Model Project plus Cumulative Configuration

350 Mission Street 3 San Francisco, CA

Figure:

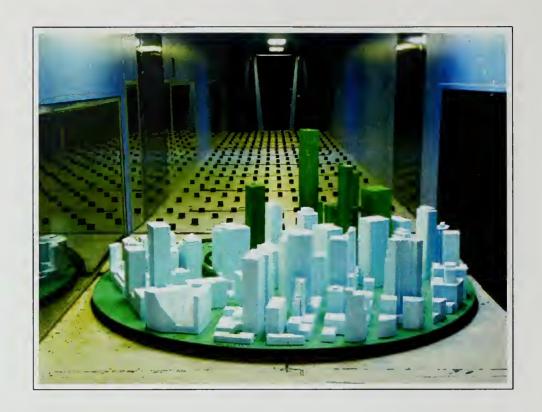
1c

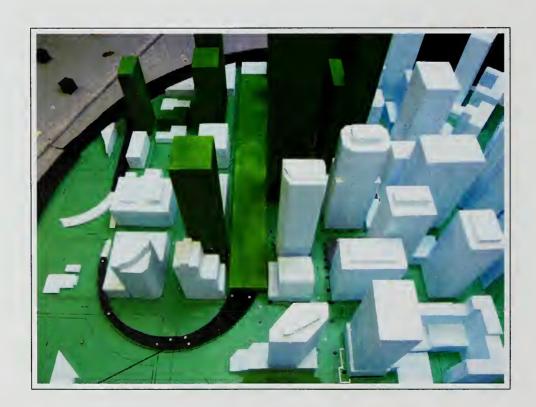
Date:

Project #1011406

April 7, 2010

**RWDI** 





Wind Tunnel Study Model Existing plus Cumulative Configuration

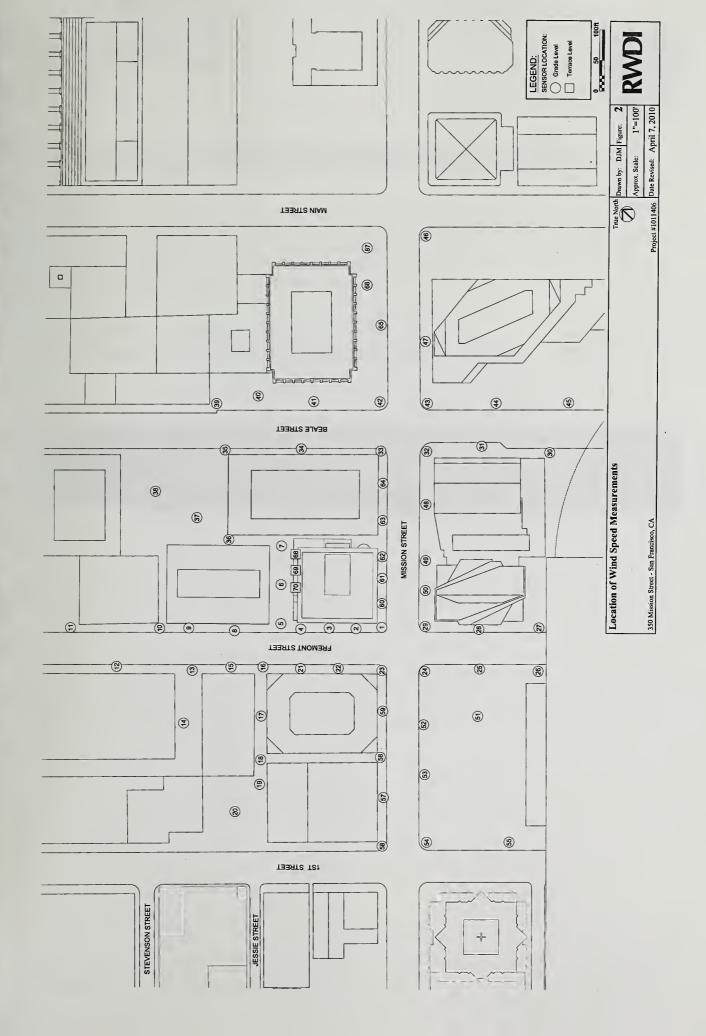
350 Mission Street San Francisco, CA

Project #1011406

Figure: 1d

Date: June 1, 2010





## APPENDIX A



#### APPENDIX A - DRAWING LIST FOR MODEL CONSTRUCTION

The drawings and information listed below were downloaded from BarkerBlue website and were used to construct the scale model of the proposed 350 Mission Street project. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design area made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

Drawing Title	Drawing Name	File Name	Date Received
3D Model	3D Model	DFSElectronic_20100122_Bldg_only.3dm	2010/03/23
			1

## APPENDIX B



#### APPENDIX B - SAN FRANCISCO PLANNING CODE SECTION 148

San Francisco Planning Code Section 148,

#### Reduction of Ground-level Wind Currents in C-3 Districts

a) **Requirement and Exception.** In C-3 Districts, buildings and additions to existing buildings shall be shaped, or other wind-baffling measures shall be adopted, so that the developments will not cause ground-level wind currents to exceed, more than 10 percent of the time year round, between 7:00 a.m. and 6:00 p.m., the comfort level of 11 m.p.h. equivalent wind speed in areas of substantial pedestrian use and seven m.p.h. equivalent wind speed in public seating areas.

When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements. An exception may be granted, in accordance with the provisions of Section 309, allowing the building or addition to add to the amount of time that the comfort level is exceed by the least practical amount if (1) it can be shown that a building or addition cannot be shaped and other wind-baffling measures cannot be adopted to meet the foregoing requirements without creating an unattractive and ungainly building form and without unduly restricting the development potential of the building site in question, and (2) it is concluded that, because of the limited amount by which the comfort level is exceeded, the limited location in which the comfort level is exceeded, or the limited time during which the comfort level is exceeded, the addition is insubstantial.

No exception shall be granted and no building or addition shall be permitted that causes equivalent wind speeds to reach or exceed the hazard level of 26 miles per hour for a single hour of the year.

- b) **Definition.** The term "equivalent wind speed" shall mean and hourly mean wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.
- c) **Guidelines.** Procedures and Methodologies for implementing this section shall be specified by the Office of Environmental Review of the Department of City Planning. (added by Ord. 414-85, App. 9/17/85)

#### CHAPTER IX

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